

engraved by G. B. Hall, New York

J. M.ouch

REPORT
OF THE
NINETEENTH ANNUAL MEETING
OF THE
**American
Street Railway Association**

HELD AT
CONVENTION HALL, KANSAS CITY, MO.,
OCTOBER 16-19, 1900.

JOHN M. ROACH,
President Chicago Union Traction Co., Chicago, Ill.,
PRESIDENT.

Association Organized December 13, 1882.

1900-1901

OFFICE OF THE ASSOCIATION
2020 STATE STREET, CHICAGO.



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OFFICERS, ORGANIZATION.

CHAIRMAN:

MOODY MERRILL,

President, Highland Street Railway Company, Boston, Mass.

SECRETARIES:

CHAUNCEY C. WOODWORTH,

Secretary, Rochester City and Brighton Railroad Company, Rochester, N. Y.

CHARLES B. CLEGG,

President, Oakwood and Dayton Street Railway Companies, Dayton, O.

PLACE OF MEETING, BOSTON, MASS.

OFFICERS SINCE ORGANIZATION.

OFFICERS, 1882-'83.

PRESIDENT:

H. H. LITTELL,

General Manager, Louisville City Railway Company, Louisville, Ky.

FIRST VICE-PRESIDENT:

WILLIAM H. HAZZARD,

President, Brooklyn City Railroad Company, Brooklyn, N. Y.

THIRD VICE-PRESIDENT:

GEORGE B. KERPER,

President, Mount Adams and Eden Park Inclined Railway, Cincinnati, O.

SECOND VICE-PRESIDENT:

CALVIN A. RICHARDS,

President, Metropolitan Railroad Company, Boston, Mass.

SECRETARY AND TREASURER:

WILLIAM J. RICHARDSON,

Secretary, Atlantic Avenue Railroad Company, Brooklyn, N. Y.

EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS and

JULIUS S. WALSH, Pres., Citizens' Railway Co., St. Louis, Mo.

CHARLES CLEMINSHAW, Vice-Pres., Troy and Lansingburgh Railroad Co., Troy, N. Y.

THOMAS LOWRY, Pres., Minneapolis Street Railway Co., Minneapolis, Minn.

JAMES K. LAKE, Supt., Chicago West Division Railway, Chicago, Ill.

DANIEL F. LONGSTREET, Gen. Man., Union Railroad Co., Providence, R. I.

PLACE OF MEETING, CHICAGO, ILL.

OFFICERS, 1883-'84.

PRESIDENT:

WILLIAM H. HAZZARD,

President, Brooklyn City Railroad Company, Brooklyn, N. Y.

FIRST VICE-PRESIDENT:

JAMES K. LAKE,

Superintendent, Chicago West Division Railway, Chicago, Ill.

SECOND VICE-PRESIDENT:

GEORGE B. KERPER,

President, Mt. Adams and Eden Park Inclined Railway, Cincinnati, O.

THIRD VICE-PRESIDENT:

DANIEL F. LONGSTREET,

General Manager, Union Railroad Co., Providence, R. I.

SECRETARY AND TREASURER:

WILLIAM J. RICHARDSON,

Secretary, Atlantic Avenue Railroad Company, Brooklyn, N. Y.

EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS and

H. H. LITTELL, Gen. Man., Louisville City Railway Co., Louisville, Ky.

JOHN G. HOLMES, Pres., Citizens' Street Railroad Co., Pittsburgh, Pa.

JULIUS E. RUGG, Supt., Highland Street Railroad, Boston, Mass.

PIERRE C. MAFFITT, Pres., Missouri Railroad Co., St. Louis, Mo.

JACOB SHARP, Pres., Twenty-third Street Railway Co., New York, N. Y.

PLACE OF MEETING, NEW YORK, N. Y.

OFFICERS, 1884-'85.

PRESIDENT:

CALVIN A. RICHARDS,

President, Metropolitan Railroad Company, Boston, Mass.

FIRST VICE-PRESIDENT:

JULIUS S. WALSH,

*President, Citizens' Railway Company,
St. Louis, Mo.*

THIRD VICE-PRESIDENT:

EDWARD LUSHER,

*Sec. and Treas., Montreal City Passenger
Railway Company, Montreal, Can.*

SECOND VICE-PRESIDENT:

HENRY M. WATSON,

*President, Buffalo Street Railroad
Company, Buffalo, N. Y.*

SECRETARY AND TREASURER:

WILLIAM J. RICHARDSON,

*Secretary, Atlantic Avenue Railroad
Company, Brooklyn, N. Y.*

EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS and

WILLIAM H. HAZZARD, Pres., Brooklyn City Railroad Co., Brooklyn, N. Y.

JAMES K. LAKE, Supt., Chicago West Division Railway, Chicago, Ill.

CHARLES J. HARRAH, Pres., People's Passenger Railway Co., Philadelphia, Pa.

WILLIAM WHITE, Pres., Dry Dock, E. Broadway & B. Railroad Co., New York, N. Y.

B. DU PONT, Pres., Central Passenger Railroad Co., Louisville, Ky.

PLACE OF MEETING, ST. LOUIS, MO.

OFFICERS, 1885-'86.

PRESIDENT:

JULIUS S. WALSH,

President, Citizens' Railway Company, St. Louis, Mo.

FIRST VICE-PRESIDENT:

WILLIAM WHITE,

*President, Dry Dock, E. Broadway & B.
Railroad Company, New York, N. Y.*

SECOND VICE-PRESIDENT:

CHARLES B. HOLMES,

*President, Chicago City Railway Company,
Chicago, Ill.*

THIRD VICE-PRESIDENT:

SAMUEL LITTLE,

*Treasurer, Highland Street Railway
Company, Boston, Mass.*

SECRETARY AND TREASURER:

WILLIAM J. RICHARDSON,

*Secretary, Atlantic Avenue Railroad
Company, Brooklyn, N. Y.*

EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS and

CALVIN A. RICHARDS, Pres., Metropolitan Railroad Co., Boston, Mass.

JOHN KILGOUR, Pres., Cincinnati Street Railway Co., Cincinnati, O.

JOHN MAGUIRE, Pres., City Railroad Co., Mobile, Ala.

THOMAS W. ACKLEY, Pres., 13th and 15th Streets Pass. Railway Co., Philadelphia, Pa.

CHAUNCEY C. WOODWORTH, Sec., Rochester City & B. Railroad Co., Rochester, N. Y.

PLACE OF MEETING, CINCINNATI, O.

OFFICERS, 1886-'87.

PRESIDENT:

THOMAS W. ACKLEY,

President, 13th and 15th Streets Passenger Railway Company, Philadelphia, Pa.

FIRST VICE-PRESIDENT:

ALBERT G. CLARK,

*Vice-President, Cincinnati Street Railway
Company, Cincinnati, O.*

SECOND VICE-PRESIDENT:

WILLIAM H. SINCLAIR,

*President, Galveston City Railroad
Company, Galveston, Tex.*

THIRD VICE-PRESIDENT:

PRENTISS CUMMINGS,

*President, Cambridge Railroad Company,
Cambridge, Mass.*

SECRETARY AND TREASURER:

WILLIAM J. RICHARDSON,

*Secretary, Atlantic Avenue Railroad
Company, Brooklyn, N. Y.*

EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS and

JULIUS S. WALSH, Pres., Citizens' Railway Co., St. Louis, Mo.

HENRY HURT, Pres., Washington and Georgetown Railroad Co., Washington, D. C.

C. DENSMORE WYMAN, Vice-Pres., Central Park, N. & E. River Railroad Co., N. Y.

A. EVERETT, Pres., East Cleveland Railroad Co., Cleveland, O.

SAMUEL S. SPAULDING, Pres., East Side Street Railroad Co., Buffalo, N. Y.

PLACE OF MEETING, PHILADELPHIA, PA.

OFFICERS, 1887-'88.

PRESIDENT:

CHARLES B. HOLMES,

President, Chicago City Railway Company, Chicago, Ill.

FIRST VICE-PRESIDENT:

JULIUS E. RUGG,

General Superintendent, Boston Consolidated Street Railway, Boston, Mass.

SECOND VICE-PRESIDENT:

R. DUDLEY FRAYSER,

President, Memphis City Railway Company, Memphis, Tenn.

THIRD VICE-PRESIDENT:

CHARLES B. CLEGG,

Director, Dayton Street Railroad Company, Dayton, O.

SECRETARY AND TREASURER:

WILLIAM J. RICHARDSON,

Secretary, Atlantic Avenue Railroad Company, Brooklyn, N. Y.

EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS and

THOMAS W. ACKLEY, Pres., 13th and 15th Streets Pass. Railway Co., Philadelphia, Pa.

WINFIELD SMITH, Pres., Cream City Railroad Co., Milwaukee, Wis.

DANIEL F. LEWIS, Pres., Brooklyn City Railroad Co., Brooklyn, N. Y.

CHARLES GREEN, Pres., People's Railway Co., St. Louis, Mo.

EDWARD G. MOSHER, Supt., Augusta and Summerville Railroad, Augusta, Ga.

PLACE OF MEETING, WASHINGTON, D. C.

OFFICERS, 1888-'89.

PRESIDENT:

GEORGE B. KERPER,

President, Mount Adams and Eden Park Inclined Railway, Cincinnati, O.

FIRST VICE-PRESIDENT:

JESSE METCALF,

President, Union Railroad Company, Providence, R. I.

SECOND VICE-PRESIDENT:

HENRY HURT,

President, Washington and Georgetown Railroad Company, Washington, D. C.

THIRD VICE-PRESIDENT:

WILLIAM H. MARTIN,

Vice-President, Ferries and Cliff House Railway Company, San Francisco, Cal.

SECRETARY AND TREASURER:

WILLIAM J. RICHARDSON,

Secretary, Atlantic Avenue Railroad Company, Brooklyn, N. Y.

EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS and

CHARLES B. HOLMES, Pres., Chicago City Railway Co., Chicago, Ill.

JOHN SCULLIN, Pres., Union Depot Railroad Co., St. Louis, Mo.

JAMES H. JOHNSTON, Pres., City and Suburban Railway Co., Savannah, Ga.

HENRY A. SAGE, Pres., Easton, S. Easton & W. E. Pass. Railway Co., Easton, Pa.

EDWARD J. LAWLESS, Supt., Metropolitan Street Railway, Kansas City, Mo.

PLACE OF MEETING, MINNEAPOLIS, MINN.

OFFICERS, 1889-'90.

PRESIDENT:

THOMAS LOWRY,

President, Minneapolis, and St. Paul, Street Railway Companies, Minneapolis, Minn.

FIRST VICE-PRESIDENT:

C. DENSMORE WYMAN,

Vice-President, Central Park, North and East River Railroad Company, New York, N. Y.

SECOND VICE-PRESIDENT:

JOHN C. SHAFER,

President, Citizens' Street Railroad Company, Indianapolis, Ind.

THIRD VICE-PRESIDENT:

ROBERT McCULLOCH,

General Manager, Citizens', St. Louis, Cass Avenue & Fair Grounds, and Benton-Bellefontaine Railways, St. Louis, Mo.

SECRETARY AND TREASURER:

WILLIAM J. RICHARDSON,

Secretary, Atlantic Avenue Railroad Company, Brooklyn, N. Y.

EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS and

GEORGE B. KERPER, Pres., Mt. Adams and E. P. Inc. Railway Co., Cincinnati, O.

GEORGE W. KIELY, Man. Dir., Toronto Street Railway Co., Toronto, Canada.

FRANK H. MONKS, Gen. Man., West End Street Railway Co., Boston, Mass.

RAPHAEL SEMMES, Supt., Citizens' Street Railroad, Memphis, Tenn.

FRANCIS M. EPPLEY, Pres., Orange Cross-Town & B. Railway Co., Orange, N. J.

PLACE OF MEETING, BUFFALO, N. Y.

OFFICERS, 1890-'91.

PRESIDENT:

HENRY M. WATSON,

President, Buffalo Street Railroad, and Buffalo East Side Street Railway, Companies, Buffalo, N. Y.

FIRST VICE-PRESIDENT:

WILLIAM A. SMITH,

General Manager, Omaha Street Railway Company, Omaha, Neb.

THIRD VICE-PRESIDENT:

ANDREW D. RODGERS,

President, Columbus Consolidated Street Railroad Company, Columbus, O.

SECOND VICE-PRESIDENT:

CHARLES ODELL,

President, Newburyport & Amesbury Street Railroad Company, Newburyport, Mass.

SECRETARY AND TREASURER:

WM. J. RICHARDSON,

Secretary, Atlantic Avenue Railroad Company, Brooklyn, N. Y.

EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS and
THOMAS LOWRY, Pres., Minneapolis and St. Paul Street R'y Co's., Minneapolis, Minn.
DAVID F. HENRY, Pres., Federal Street and P. V. Pass Railway Co., Pittsburg, Pa.
ALBERT E. THORNTON, Dir., Atlanta Street Railroad Co., Atlanta, Ga.
HARVEY M. LITTELL, Gen. Man., Cincinnati Inclined Plane R'y Co., Cincinnati, O.
THOMAS C. KEEFER, Pres., Ottawa City Pass Railway Co., Ottawa, Canada.

PLACE OF MEETING, PITTSBURG, PA.

OFFICERS, 1891-'92.

PRESIDENT:

JOHN G. HOLMES,

President, Citizens' Traction Company, Pittsburgh, Pa.

FIRST VICE-PRESIDENT:

THOMAS H. McLEAN,

Secretary, Twenty-third Street Railway Company, New York, N. Y.

SECOND VICE-PRESIDENT:

JAMES B. SPEED,

President, Louisville City Railway Company, Louisville, Ky.

THIRD VICE-PRESIDENT:

ALBION E. LANG,

Vice-President, Toledo Consolidated Street Railway Company, Toledo, O.

SECRETARY AND TREASURER:

WM. J. RICHARDSON,

Secretary, Atlantic Avenue Railroad Company, Brooklyn, N. Y.

EXECUTIVE COMMITTEE:

PRESIDENT, VICE PRESIDENTS and
HENRY M. WATSON, Pres., Buffalo Railway Co., Buffalo, N. Y.
LEWIS PERRINE, JR., Pres., Trenton Pass. Railway Co. Consolidated, Trenton, N. J.
W. WORTH BEAN, Pres., St. Joseph and Benton Harbor R'y Co., St. Joseph, Mich.
MURRY A. VERNER, Pres., Pittsburgh and Birmingham Traction Co., Pittsburgh, Pa.
THOMAS C. PENNINGTON, Treas., Chicago City Railway Co., Chicago.

PLACE OF MEETING, CLEVELAND, O.

OFFICERS, 1892-'93.

PRESIDENT:

D. F. LONGSTREET,

Vice-Pres. and Gen. Man., West End Street Railroad Company, Denver, Col.

FIRST VICE-PRESIDENT:

A. EVERETT,

President, East Cleveland Railroad Company, Cleveland, O.

THIRD VICE-PRESIDENT:

W. WORTH BEAN,

President, St. Joseph & Benton Harbor Electric Ry. Co., St. Joseph, Mich.

SECOND VICE-PRESIDENT:

JOEL HURT,

President, Atlanta Consolidated Street Railroad Company, Atlanta, Ga.

SECRETARY AND TREASURER:

WM. J. RICHARDSON,

Sec. and Treas., Atlantic Avenue Railroad Company, Brooklyn, N. Y.

EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS and
JOHN G. HOLMES, Pres., Citizens' Traction Co., Pittsburgh, Pa.
JOHN D. CRIMMINS, Pres., Metropolitan Traction Co., New York, N. Y.
THOMAS J. MINARY, Gen. Man., Louisville Railway Co., Louisville, Ky.
JAMES R. CHAPMAN, Vice-Pres., Consolidated St. Railway Co., Grand Rapids, Mich.
BENJAMIN E. CHARLTON, Pres., Hamilton Street Railway Co., Hamilton, Ont.

PLACE OF MEETING, MILWAUKEE, WIS.

OFFICERS, 1896-'97.

PRESIDENT :

ROBERT McCULLOCH,

*Vice-Pres. and Gen. Man. Citizens', Cass Avenue and St. Louis Railroad Companies,
St. Louis, Mo.*

FIRST VICE-PRESIDENT :

CHARLES S. SERGEANT,

*Gen. Man. West End Street Railway Co.,
Boston, Mass.*

THIRD VICE-PRESIDENT :

C. F. HOLMES,

*Gen. Man. Metropolitan Street Railway
Co., Kansas City, Mo.*

SECOND VICE-PRESIDENT :

D. B. DYER,

*Pres. Augusta Railway and Electric Co.,
Augusta, Ga.*

SECRETARY AND TREASURER :

T. C. PENINGTON,

*Treas. Chicago City Railway Co.,
Chicago, Ill.*

EXECUTIVE COMMITTEE :

PRESIDENT, VICE-PRESIDENTS AND

H. M. LITTELL, Vice Pres. and Gen. Man. Metropolitan St. Ry. Co., New York City.

H. P. BRADFORD, Gen. Man. Cincinnati Inclined Plane Railway Co., Cincinnati, Ohio.

CHARLES H. SMITH, Gen. Supt. Troy City Railway Co., Troy, N. Y.

HARRY SCULLIN, Vice-Pres. and Gen. Man. Union Depot Railroad Co., St. Louis, Mo.

GEORGE B. HIPPEE, Gen. Man. Des Moines City Railway Co., Des Moines, Iowa.

PLACE OF MEETING, NIAGARA FALLS, N. Y.

OFFICERS, 1897-'98.

PRESIDENT :

ALBION E. LANG,

President Toledo Traction Co., Toledo, Ohio

FIRST VICE-PRESIDENT :

W. CARYL ELY,

*President Buffalo and Niagara Falls
Electric Ry. Co., Niagara Falls, N. Y.*

THIRD VICE-PRESIDENT :

EDWARD G. CONNETTE,

*Gen. Man. Nashville Street Railway
Nashville, Tenn.*

SECOND VICE-PRESIDENT :

JOHN A. RIGG,

*President United Traction Co.,
Reading, Pa.*

SECRETARY AND TREASURER :

T. C. PENINGTON,

*Treasurer Chicago City Railway Co.,
Chicago, Ill.*

EXECUTIVE COMMITTEE :

PRESIDENT, VICE-PRESIDENTS AND

ROBERT McCULLOCH, Vice-President and Gen. Man. Citizens', Cass Ave. and St. Louis
R. R. Companies, St. Louis, Mo.

C. DENSMORE WYMAN, Gen. Man. New Orleans Traction Co., Ltd., New Orleans, La.

HENRY C. MOORE, President Trenton Street Railway Co., Trenton, N. J.

JOHN M. ROACH, Vice-President and Gen. Man. North Chicago Street Railroad Co.,
Chicago, Ill.

ROBERT S. GOFF, President and Gen. Man. Globe Street Railway Co., Fall River, Mass

PLACE OF MEETING, BOSTON, MASS.

OFFICERS, 1898-'99.

PRESIDENT :

CHARLES S. SERGEANT,

Second Vice-President Boston Elevated Railway Co., Boston, Mass.

FIRST VICE-PRESIDENT :

HENRY C. MOORE,

*President Trenton Street Railway Co.,
Trenton, N. J.*

THIRD VICE-PRESIDENT :

WALTON H. HOLMES,

*Vice-Pres. and Gen. Man. Metropolitan
Street Railway Co., Kansas City, Mo.*

SECOND VICE-PRESIDENT :

ERNEST WOODRUFF,

*Pres. Atlanta Consolidated Street Railway
Co., Atlanta, Ga.*

SECRETARY AND TREASURER :

T. C. PENINGTON,

*Treas. Chicago City Railway Co.,
Chicago, Ill.*

EXECUTIVE COMMITTEE :

PRESIDENT, VICE-PRESIDENTS AND

ALBION E. LANG, President Toledo Traction Co., Toledo, Ohio.

GEORGE A. YUILLE, Second Vice-Pres. West Chicago Street Railroad Co., Chicago, Ill.

FRANK G. JONES, Vice-President Memphis Street Railway Co., Memphis, Tenn.

JOHN I. BEGGS, Gen. Man. Milwaukee Electric Railway and Light Co., Milwaukee, Wis.

IRA A. McCORMACK, Gen. Supt. Brooklyn Heights Railroad Co., New York, N. Y.

PLACE OF MEETING, CHICAGO, ILL.

OFFICERS, 1899-1900.

PRESIDENT:

JOHN M. ROACH,

President Chicago Union Traction Co., Chicago, Ill.

FIRST VICE-PRESIDENT:

JOHN A. RIGG,

*President United Traction Co.,
Reading, Pa.*

THIRD VICE-PRESIDENT:

FRANK G. JONES,

*Vice-President Memphis Street Railway Co.,
Memphis, Tenn.*

SECOND VICE-PRESIDENT:

HERBERT H. VREELAND,

*President Metropolitan Street Railway Co.,
New York, N. Y.*

SECRETARY AND TREASURER:

T. C. PENINGTON,

*Treasurer Chicago City Railway Co.,
Chicago, Ill.*

EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS AND

CHARLES S. SERGEANT, Second Vice-President Boston Elevated Railway Co., Boston, Mass.

CHARLES K. DURBIN, General Superintendent Denver City Tramway Co., Denver, Colo.

NICHOLAS S. HILL, JR., General Manager Charleston Consolidated Gas and Electric Co.,
Charleston, S. C.

CHARLES W. WASON, President Cleveland, Painesville & Eastern Railway Co., Cleveland, O.

JOHN R. GRAHAM, President Quincy and Boston Street Railway Co., Quincy, Mass.

PLACE OF MEETING, KANSAS CITY, MO.

MINUTES.

TUESDAY'S SESSION.

CONVENTION HALL,
KANSAS CITY, Mo., October 16, 1900. }

President John M. Roach of Chicago, Ill., called the meeting to order at 11:15 A. M.

President Roach—Gentlemen, you will please come to order. The first business of the session this morning will be an address of welcome. We have a distinguished citizen of this city with us, who will extend a welcome to you. I take great pleasure in introducing to you His Honor, James A. Reed, Mayor of Kansas City. [Applause.]

ADDRESS OF WELCOME.

Mayor Reed—*Mr. President and Gentlemen:* I do not know whether I can make you hear me this morning or not. My voice, which usually is as soft and as musical as the notes of a flute wafted over moonlit waters, has been laid on the altar of my country to such an extent in the last few days that I imagine it bears a distinct resemblance to the inharmonious blending of the sounds of a cracked fiddle and the roar of a buzz-saw. [Laughter.] If I can make you hear, and say something to make you feel at home in this city, I shall be delighted.

I esteem it, Mr. President and gentlemen, a great honor to address this body of distinguished gentlemen, which possibly resembles the funeral of Abel. It was small but select; none but the first families were present. [Laughter.] I trust that your meeting here in this roof garden will not too vividly recall that line of the Scriptures which declares that "The wicked dwell in high places." [Laughter.]

Of course, I do not know much about street car men, except our friends, Con and Walton Holmes; and, by the way, I have heard it rumored on the street that "Con" is not Mr. Holmes' proper name at all—that the name "Con" has been acquired by virtue of Mr. Holmes' various and intricate business transactions in this city, and his ability to "talk" franchises out of the Council, and when he gets them to immediately put them into execution. [Laughter.]

I have little to say to you, gentlemen; I shall not bore you with a speech, because I do not know what purpose a speech serves on an occasion of this kind. The old Egyptians had a custom, so it is related, when they had a feast and everybody was feeling hilarious and good-natured—they had a pleasant custom of passing around a skull and saying to each of the guests, "Remember you are mortal—remember you are mortal," so I apprehend I was brought here to represent the skull and cross-bones of this occasion. You are here to transact important business. You have important objects in view, and it is not a time for speech-making. It is a time when you desire to deliberate and get to business.

I want to say, on behalf of this city, that Kansas City, as much as any other city in the world, welcomes to her midst the representative business men of all other cities. We believe out here in the West that it takes capital and brains and courage to build cities. We know that if capital comes to us, it comes because it expects a fair remuneration; and I want to call your attention to the fact that you are in Missouri; and, notwithstanding the fact that all of the States that surround us, in times past—in those troublous times when there were hard financial conditions existing—while every other State in the Union, almost—I will qualify it by saying when nearly all the Western States—placed upon their statute books laws aimed at the destruction of the wealth of financial institutions, there never has been a syllable, line or sentence of what we commonly denominate "crank legislation" placed upon the statute books of Missouri. [Applause.]

We believe here in this State—for I would not be misunder-

stood—we believe here in this State that capital should receive its fair share of remuneration; but we believe, at the same time, that these great institutions which you represent owe some duties to the citizens of the cities, and that it is their business and duty to serve the citizens and serve them well. While we believe in that, we at the same time realize the fact that great financial institutions must be secure in their profits; but we maintain that the people have the right to ask of them a policy of “Live and let live,” a policy of serving the people and in turn being benefited by the people. That is Missouri doctrine, and it is Kansas City doctrine. We know here in Kansas City what Eastern capital has done for us. We know that fifteen or sixteen years ago we scarcely had in Kansas City a mile of paved streets. We know that it took a good deal of money to pave our streets—of course that was paid for by our citizens, but it took money to create the great plants for the purpose of paving our streets. While we insist, and shall insist, that these institutions should treat our people fairly, at the same time the people of Kansas City are willing that they shall receive a fair remuneration upon the capital invested. Our people have done this, and the result has been that in the past fifteen years, I believe, for the size of the city, we have paved more streets than any other city in the world. [Applause.]

We believe in inviting the capital of the East here for the purpose of investing in great public buildings. I do not believe a single man lives who came to Kansas City and used ordinary good business judgment in the matter of his investment in great public buildings but to-day is receiving splendid dividends upon that investment. Of course, there were men who came here during the “boom” days, when the whole town and the whole country had gone mad, who bought property without regard to business judgment, and paid fabulous prices for the property and lost money; but the men who came here with business judgment and with business care, and invested their money as men ought to invest it, these men have all received fair dividends upon every dollar they invested in Kansas City soil.

We had a few years ago in this town two streaks of rust and a few teams of mules drawing horse cars that meandered slowly and laboriously up and down the almost inaccessible cliffs of this town. This was called a railroad system, and it was said that the cars were run for many years for the purpose of holding the franchise. I do not know what the object or purpose of the railroad was, but I do know that everybody who was in a hurry was always obliged to walk. [Laughter.]

About the period referred to—fifteen or sixteen years ago—there was begun the building of the present street car system of Kansas City, built first with a cable equipment, and Mr. Holmes will, I presume, tell you here in your secret meetings what struggles his company underwent in overcoming the natural difficulties of this town; but to-day, in riding over our street car system, you, better than I, will judge whether any progress has been made. And as far as dividends are concerned on this road, I apprehend that Mr. Holmes can tell you all about that, if he only will.

The point I want to impress upon you, gentlemen—and I do it with the selfish purpose of convincing, as far as I can, each man in this audience that Kansas City is a good place to invest money in—is this, that every legitimate enterprise, where the men have come and used good business judgment, has been a success in this city. We have no warfare to make upon capital. Of course, as I said before, we do insist that capital shall treat us fairly; and, as a general proposition, capital has treated us fairly. We have a telephone system in this town, and I want to say to you, gentlemen, if any of you desire to build a telephone system, we will treat you fairly if you will only give us instruments which will enable us to hear what is said over the wire. [Laughter.] We complain only when we have legitimate cause to complain, and we complain loudly against that institution. Some one may be here who owns stock in that company, but I make the statement, nevertheless.

I want you to look at this city. I want to call your attention to this fact—that it lies in the very center of the richest agricultural country that God ever spread out beneath the can-

opy of the skies. In whatever direction you go from Kansas City, for hundreds of miles, you pass through the finest arable land there is in the United States of America. I want to call your attention to the fact that there is scarcely a town or village for hundreds of miles in either direction from Kansas City but is, by force of our railroad system, compelled to pay its tribute to this great center or heart of that district. If you will take a railroad map and carefully study it as business men, as practical men, it will demonstrate to you that Kansas City is scarcely second to any city in the United States as a railroad center. You will see that with this immense country lying about us, with its immense riches but one-tenth developed, that as this country develops, that as the farms are improved, that as the villages are improved and increase in wealth and population, they are, by force of natural conditions, compelled to pay tribute to Kansas City, and that this city has a future not based upon the boomer's speculative views, not based upon the dreamer's fancy, but bottomed upon natural conditions and natural advantages which are bound to place Kansas City far in advance of its present condition, and, I believe, far in advance of any city lying west of St. Louis. [Applause.]

Let me call your attention to one fact: From this city down to the Southern coast, down to the Gulf, we have various railroad lines. This city is the outlet for all of the grain, all of the cattle, and all of the farm products of every description of the entire West and Northwest, and that as soon as the Nicaragua Canal is built, if it is ever built—and I hope when it is built it will be built by the American Government [applause] and that frowning over it at each end, and wherever necessary between those ends, will be American forts and American cannon [applause],—when the canal is built and the shipping attracted by that great waterway is added to the lines of vessels that already ply from these Southern ports, this city must receive greater benefit than any other city in the United States. The reason for this is that the railroads are already built here, and they will not be torn up, and having already been built here, all of the grains and all of the farm products of the

great West and Northwest, and much of the Southwest, will flow through the gateway of Kansas City to the direct lines leading down to the Gulf.

I speak of these things to call your attention to our natural advantages and to the natural geographical location of the city and the fact that we have a future not based upon speculation, but upon the tremendous natural advantages which have built up this town in less than twenty years, from a little hamlet to such a city as you see here to-day. Another reason why we are going to succeed here is because of the character of our people. I believe this is the most typical American city there is on this continent. Each of you live in a city and each one thinks his city is "it." Each of you gentlemen think your city is the best city, and I have nothing to say against your city; but I hold, with all due modesty, that it can be said that this is the most typically American city on the continent. Here in our State and city is the parent stock of the very best people of the South, and grafted on to this original stock we have the Yankee with his genius; the Easterner with his conservatism; the Westerner with his push and energy; and wherever you go in Kansas City, you will touch elbows as you pass upon the street, with men from every State in this nation, and I might add from every nation in the world. We even have a few Greeks and Turks which we keep for exhibition purposes.

What does this mean in the building up of a city? I have said before that the "horizon of civilization is swept by the white caps of progress"; that it is the boy who has brains and genius and courage, who leaves his home in the East and comes to the West and in developing the West himself has developed into that type of manhood which has made this country what it is. In the progress of the nations, every time the Almighty God has skimmed the milk of humanity He has turned the cream over the western side of the dish—and the cream is pretty thick right here in the Missouri valley. The result is that there is such energy, such determination to succeed, such an indomitable will back of everything that our

people undertake, that Kansas City has made a splendid success in the few years she has been building.

Let me give you one illustration, and with that I close. At a tremendous expense for a town of this size, with not very many extremely wealthy men in it, we built this Convention Hall. We built it as a public enterprise, and into it went the money of the capitalist, and the money of all our citizens, even down to the men who carry the dinner-pail, not always so full, either; into this Convention Hall went the dollars of the laboring men. [Applause.] It was destroyed by fire, and we had invited the National Democratic Convention to meet here on the 4th of July. This hall was burned, if I recollect aright, exactly ninety days before that convention met. It went up in smoke and flame, and in an hour these great girders of iron and steel were twisted like so many thousand serpents. Great masses of iron and steel were piled down in a heap in the center of the building, so that it looked as if it would take a year to remove them. Before the building had been on fire an hour, thousands and thousands of dollars had been subscribed to rebuild it, and in the ninety days which intervened between the burning of the building and the 4th day of July we had made our contracts for the new steel with which to build this hall again, and the hall itself was erected. We had to make these contracts as rush orders, and you street railway men will understand what a "rush" order means, and how much it costs, but when the 4th day of July rolled around, this building had risen from the ashes of the former building and was completed as you see it here at this minute. [Applause.] A lot of "lobsters," gentlemen, do not do that kind of work, if you will pardon the use of a slang phrase. It is because we have that kind of people that we are succeeding here, and we are glad to have you come here, representing, as you do, great institutions with immense wealth back of them, and we ask you to look this city over, and see whether it is not about the best place in the United States in which to make money, and if you come here, you will be treated fairly by our citizens.

I need not extend to you the liberty of this city. That old

phrase died years ago, and then I never saw a lot of street car magnates in my life that needed the liberties of a city—they generally know how to get them [laughter] ; but you are welcome here among us. and I know you will be made to feel at home because I know the Messrs. Holmes and their associates in business here will make you feel welcome and make you feel at home. You may have read something in the papers here of police outrages, but if, perchance you lose your way, for that is all would ever happen to so distinguished a body of gentlemen as you are—if perchance you do lose your way, I guarantee you that some good police officer, like the righteous Samaritan, will conduct you to your hotel in peace and with due dignity, and, if necessary, will take you up the back way. [Applause.]

President Roach—Mr. Mayor, on behalf of the Association, I desire to thank you for your eloquent words of welcome, and also to give you my personal thanks.

The first business at this meeting is the calling of the roll. If it is the pleasure of the meeting, instead of taking time to call the roll, the official registration of the Secretary will be deemed the calling of the roll. That has been the custom in the past, and will be considered as applying at this time, if there is no objection.

(The following record of attendance is taken from the registers at the door of the meeting hall:)

DELEGATES OF MEMBERS.

(ARRANGED ALPHABETICALLY ACCORDING TO CITIES.)

The following named gentlemen were in attendance at the meeting, representing companies that are members of the Association :

AKRON, Ohio.....	L. E. Beilstein, Gen. Man., Northern Ohio Traction Co.
ASBURY PARK, N. J..	S. F. Hazelrigg, Gen. Man., Atlantic Coast Line Elec. R. R. Co.
ATCHISON, Kan.....	J. A. Bendure, Gen. Man., Atchison Ry., Light and Power Co.
ATLANTA, Ga.....	Ernest Woodruff, Pres., Atlanta Ry. and Power Co.
" "	J. R. Gordon, Eng., Atlanta Ry. and Power Co.

- AUGUSTA, Ga. D. B. Dyer, Pres., Augusta Ry. and Elec. Co.
 " " C. O. Simpson, Sec. and Treas., Augusta Ry. and Elec. Co.
 BIRMINGHAM, Ala. . . . John B. McClary, Gen. Man., Birmingham Ry., Light and Power Co.
 " " . . . George H. Harris, Ch. Eng., Birmingham Ry., Light and Power Co.
 " " . . . D. B. Dimick, Elec. Eng., Birmingham Ry., Light and Power Co.
 BOSTON, Mass. Charles S. Sergeant, Vice-Pres., Boston Elevated Ry. Co.
 " " Henry L. Wilson, Aud., Boston Elevated Ry. Co.
 BRIDGETON, N. J. . . . Henry J. Crowley, Vice-Pres., Bridgeton and Millville Traction Co.
 " " . . . B. Frank Hires, Gen. Man., Bridgeton and Millville Traction Co.
 BROCKTON, Mass. . . . John R. Graham, Pres., Brockton St. Ry. Co.
 " " . . . Elwin C. Foster, Gen. Man., Brockton St. Ry. Co.
 BROOKLYN, N. Y. . . . Clinton L. Rossiter, Pres., Brooklyn Heights R. R. Co.
 " " . . . Eugene Chamberlin, Supt. of Equip., Brooklyn Heights R. R. Co.
 " " . . . Newton W. Bolen, Div. Supt., Brooklyn Heights R. R. Co.
 BROOKFIELD, Mass. . . E. P. Shaw, Dir., Warren, Brookfield and Spencer St. Ry. Co.
 BUFFALO, N. Y. C. A. Coons, Asst. Supt., Buffalo Ry. Co.
 CAMDEN, N. J. Walter E. Harrington, Gen. Man., Camden and Suburban Ry. Co.
 CHESTER, Pa. John A. Rigg, Pres., Chester Traction Co.
 " " Joseph C. Lugar, Supt., Chester Traction Co.
 CHICAGO, Ill. H. M. Sloan, Gen. Man., Calumet Elec. St. Ry. Co.
 " " Robert McCulloch, Gen. Man., Chicago City Ry. Co.
 " " T. C. Penington, Treas., Chicago City Ry. Co.
 " " C. N. Duffy, Aud., Chicago City Ry. Co.
 " " C. E. Wilson, Ch. Eng., Chicago City Ry. Co.
 " " M. O'Brien, Mast. Mech., Chicago City Ry. Co.
 " " H. M. Sills, Asst. Mast. Mech., Chicago City Ry. Co.
 " " C. E. Lund, Draughtsman, Chicago City Ry. Co.
 " " John M. Roach, Pres., Chicago Con. Traction Co.
 " " T. A. Henderson, Gen. Supt., Chicago Con. Traction Co.
 " " E. R. Gilbert, Gen. Man., Chicago Elec. Traction Co.
 " " John M. Roach, Pres., Chicago Union Traction Co.
 " " J. Millar, Mast. Mech., Chicago Union Traction Co.
 " " George Voigt, Elec., Chicago Union Traction Co.
 " " Charles Westphal, Chicago Union Traction Co.
 " " William Walmsley, Supt., South Chicago City Ry. Co.
 CINCINNATI, Ohio. . . . W. H. Harris, Cincinnati St. Ry. Co.

- CLEVELAND, Ohio... John Ehrhardt, Asst. Sec., Cleveland City Ry. Co.
 " " C. B. Easty, Mast. Mech., Cleveland City Ry. Co.
 " " Ira A. McCormack, Gen. Man., Cleveland Elec. Ry. Co.
 " " W. G. McDole, Aud., Cleveland Elec. Ry. Co.
 " " Charles W. Wason, Pur. Agt., Cleveland Elec. Ry. Co.
 " " Edwin C. Faber, Gen. Pass. Agt., Cleveland Elec. Ry. Co.
- COLORADO SPRINGS, Colo. Frank C. Lawton, Supt., Colorado Springs Rapid Transit Ry. Co.
- COLUMBIA, Pa. Frank S. Given, Gen. Man., Conestoga Traction Co.
- COLUMBUS, Ohio.... Michael S. Hopkins, Gen. Supt., Columbus Ry. Co.
 " " P. V. Burington, Sec. and Aud., Columbus Ry. Co.
- COUNCIL BLUFFS, Ia. W. S. Dimmock, Gen. Man., Omaha and Council Bluffs Ry. and Bridge Co.
 " " .. W. B. Tarkington, Mast. Mech., Omaha and Council Bluffs Ry. and Bridge Co.
 " " .. W. G. Denny, Foreman of Shops, Omaha and Council Bluffs Ry. and Bridge Co.
- DALLAS, Tex. G. Van Ginkel, Pres., Dallas Con. Elec. St. Ry. Co.
- DANVILLE, Ill. Samuel L. Nelson, Gen. Man., Danville St. Ry. and Light Co.
- DAVENPORT, Iowa.. James F. Lardner, Gen. Man., Tri-City Ry. Co.
 " " ... John G. Huntoon, Gen. Supt., Tri-City Ry. Co.
 " " ... John D. Fish, Elec. Eng., Tri-City Ry. Co.
- DAYTON, Ohio.... Charles L. S. Tingley, Sec. and Treas., People's Ry. Co.
- DENVER, Colo. J. B. Hogarth, Aud., Denver City Tramway Co.
- DES MOINES, Iowa... A. G. Maish, Sec., Des Moines City Ry. Co.
 " " " .. W. G. Owens, Supt., Des Moines City Ry. Co.
 " " " .. E. R. Emmons, Elec., Des Moines City Ry. Co.
 " " " .. J. E. Welsch, Foreman of Shop, Des Moines City Ry. Co.
- " " " .. Thomas Marlow, Roadmaster, Des Moines City Ry. Co.
- DETROIT, Mich. A. L. Parker, Second Vice-Pres., Detroit, Rochester, Romeo and Lake Orion Ry. Co.
- FALL RIVER, Mass.. Robert S. Goff, Pres., Globe St. Ry. Co.
- FINDLAY, Ohio C. D. Kinney, Vice-Pres. and Treas., Findlay St. Ry. Co.
 " " Charles F. Smith, Man., Findlay St. Ry. Co.
- FOND DU LAC, Wis... T. F. Grover, Pres. and Gen. Man., Fond du Lac St. Ry. and Light Co.
- HAMILTON, Ontario.. C. K. Green, Man., Hamilton Elec. Light and Cataract Power Co.
 " " .. J. B. Griffith, Pur. Agt., Hamilton Elec. Light and Cataract Power Co.
- HARRISBURG, Pa.... Mason D. Pratt, Eng., Harrisburg Traction Co.
- HAZLETON, Pa. C. A. Bragg, Dir., Lehigh Traction Co.

- HOBOKEN, N. J. W. S. Hall, Gen. Supt., North Hudson County Ry. Co.
- HOUSTON, Texas H. F. MacGregor, Vice-Pres. and Gen. Man., Houston Elec. St. Ry. Co.
- INDIANAPOLIS, Ind. . . James M. Jones, Second Vice-Pres., Indianapolis St. Ry. Co.
- “ “ . . . W. F. Millholland, Treas. and Asst. Sec., Indianapolis St. Ry. Co.
- “ “ . . . Edward P. Burch, Consulting Eng., Indianapolis St. Ry. Co.
- JACKSON, Miss. Frank G. Jones, Pres., Jackson Ry., Light and Power Co.
- JERSEY CITY, N. J. . . E. D. Hibbs, Aud., North Jersey St. Ry. Co.
- “ “ “ . . . G. F. Chapman, Gen. Supt., North Jersey St. Ry. Co.
- “ “ “ . . . A. W. Pratt, Roadmaster, North Jersey St. Ry. Co.
- JOHNSTOWN, Pa. . . . H. C. Evans, Dir., Johnstown Pass. Ry. Co.
- JOLIET, Ill. Samuel G. De Coursey, Pres., Joliet Ry. Co.
- “ “ F. E. Fisher, Gen. Man., Joliet Ry. Co.
- “ “ A. S. Kibbe, Eng., Joliet Ry. Co.
- KALAMAZOO, Mich. . . R. L. Rand, Gen. Supt., Michigan Traction Co.
- “ “ . . . J. B. Foote, Ch. Elec., Michigan Traction Co.
- KANSAS CITY, Kan. . . W. H. Gabriel, Vice-Pres., Kansas City-Leavenworth Ry. Co.
- “ “ . . . Herbert W. Wolcott, Sec., Kansas City-Leavenworth Ry. Co.
- “ “ . . . E. E. Comb, Man., Kansas City-Leavenworth Ry. Co.
- “ “ . . . H. E. Gabriel, Asst. Man., Kansas City-Leavenworth Ry. Co.
- “ “ . . . H. S. deNeefe, Div. Supt., Kansas City-Leavenworth Ry. Co.
- “ “ . . . O. D. Henry, Div. Supt., Kansas City-Leavenworth Ry. Co.
- “ “ . . . W. H. Hammond, Pass. and Claim Agt., Kansas City-Leavenworth Ry. Co.
- “ “ . . . C. K. Steig, Elec. Eng., Kansas City-Leavenworth Ry. Co.
- KANSAS CITY, MO. . . W. O. Hands, Gen. Man., East Side Elec. Ry. Co.
- “ “ . . . Charles E. Jack, Aud., East Side Elec. Ry. Co.
- “ “ . . . Walton H. Holmes, Pres., Metropolitan St. Ry. Co.
- “ “ . . . L. E. James, Vice-Pres., Metropolitan St. Ry. Co.
- “ “ . . . Daniel B. Holmes, Counsel, Metropolitan St. Ry. Co.
- “ “ . . . W. E. Kirkpatrick, Sec. and Treas., Metropolitan St. Ry. Co.
- “ “ . . . C. F. Holmes, Gen. Mgr., Metropolitan St. Ry. Co.
- “ “ . . . J. A. Harder, Aud., Metropolitan St. Ry. Co.
- “ “ . . . W. A. Satterlee, Supt., Metropolitan St. Ry. Co.
- “ “ . . . J. W. Carter, Asst. Supt., Metropolitan St. Ry. Co.

- KANSAS CITY, MO....H. C. Schwitzgebel, Pur. Agt., Metropolitan St. Ry. Co.
 " " ...D. W. Dozier, Ch. Eng., Metropolitan St. Ry. Co.
 " " ...W. G. Becker, Mast. Mech., Metropolitan St. Ry. Co.
 " " ...Charles Grover, Elec. Eng., Metropolitan St. Ry. Co.
 " " ...Edward Butts, Line Eng., Metropolitan St. Ry. Co.
- KNOXVILLE, Tenn...Robert Kinsell Howard, Supt., Knoxville Traction Co.
- LEBANON, Pa.....Dr. Walter A. Rigg, Dir., Lebanon Valley St. Ry. Co.
 " "K. A. Fichthorn, Dir., Lebanon Valley St. Ry. Co.
- LONDON, Ontario....C. E. A. Carr, Gen. Man., Sec. and Treas., London St. Ry. Co.
- LOUISVILLE, Ky.....T. J. Minary, Pres., Louisville Ry. Co.
 " "Samuel G. Boyle, Sec. and Treas., Louisville Ry. Co.
 " "T. H. Minary, Asst. Supt. of Con., Louisville Ry. Co.
- LOWELL, Mass. Elwin C. Foster, Gen. Man., Lowell, Lawrence and Haverhill St. Ry. Co.
- LYNN, Mass.....Elwin C. Foster, Gen. Man., Lynn and Boston R. R. Co.
- MEMPHIS, Tenn.....Frank G. Jones, Vice-Pres. and Gen. Man., Memphis St. Ry. Co.
- MERIDEN, Conn.....N. H. Heft, Pres., Meriden Elec. R. R. Co.
- MERIDIAN, Miss....John Kamper, Meridian St. R. R. and Power Co.
- MERRIMAC, Mass....James F. Wattles, Dir., Haverhill and Amesbury St. Ry. Co.
 " "Charles S. Clark, Dir., Haverhill and Amesbury St. Ry. Co.
- MILWAUKEE, Wis....John I. Beggs, Gen. Man., Milwaukee Elec. Ry. and Light Co.
 " " ...T. E. Mitten, Gen. Supt., Milwaukee Elec. Ry. and Light Co.
 " "G. J. Sunny, Special Agt., Milwaukee Elec. Ry. and Light Co.
- NASHVILLE, Tenn....F. W. Child, Dir., Nashville St. Ry.
- NEW ORLEANS, La...W. B. Brockway, Asst. Sec. and Aud., New Orleans and Carrollton R. R. Co.
- NEW YORK, N. Y....Herbert H. Vreeland, Pres., Metropolitan St. Ry. Co.
- NORRISTOWN, Pa....John A. Rigg, Pres., Schuylkill Valley Traction Co.
 " "Samuel D. Missimer, Ch. Eng., Schuylkill Valley Traction Co.
- NORTH ADAMS, Mass.W. T. Nary, Supt., Hoosac Valley St. Ry. Co.
- OIL CITY, Pa.....James H. Forbush, Supt., Oil City St. Ry. Co.
- OMAHA, Neb.....W. A. Smith, Gen. Man., Omaha St. Ry. Co.
 " " ...F. A. Tucker, Gen. Supt., Omaha St. Ry. Co.
- OTTAWA, Ill.....F. S. Donnell, Pres., Ottawa Ry., Light and Power Co.
- OTTAWA, Ontario....J. E. Hutcheson, Supt., Ottawa Elec. Ry. Co.
- PASADENA, Cal.....W. H. Smith, Gen. Man., Los Angeles and Pasadena Elec. Ry. Co.

- PEORIA, Ill.....L. E. Myers, Gen. Man., Peoria and Pekin Terminal Ry. Co.
 " "N. C. Draper, Supt., Peoria and Pekin Terminal Ry. Co.
 PHILADELPHIA, Pa...John A. Rigg, Pres., Holmesburg, Tacony and Frankford Elec. Ry. Co.
 " " ..C. C. Long, Elec. Eng., Holmesburg, $\frac{3}{4}$ Tacony and Frankford Elec. Ry. Co.
 " " ..John A. Rigg, Pres., Roxborough, Chestnut Hill and Norristown Ry. Co.
 " " ..George Hoeger, Supt., Roxborough, Chestnut Hill and Norristown Ry. Co.
 PITTSBURG, Pa.....Charles Fitzgerald, Supt., Consolidated Traction Co.
 " "Robert I. Todd, Gen. Mast. Mech., Consolidated Traction Co.
 " "George S. Davison, Gen. Man., Monongahela St. Ry. Co.
 " "C. S. Mitchell, Aud., United Traction Co.
 PORT CHESTER, N. Y. G. Stanley Heft, Elec. Eng., Port Chester St. Ry. Co.
 PORTLAND, Me.....W. R. Wood, Pres., Portland Ry. Co.
 " "E. A. Newman, Gen. Man., Portland Ry. Co.
 " "C. C. Pierce, Gen. Elec., Portland Ry. Co.
 " "William E. Dow, Asst. Supt., Portland and Yarmouth Elec. Ry. Co.
 " "George E. Raynes, Starter, Portland and Yarmouth Elec. Ry. Co.
 PORT HURON, Mich..A. Dixon, Pres., City Elec. Ry. Co.
 " " ..W. L. Jenks, Treas., City Elec. Ry. Co.
 " " ..H. A. Dixon, Man., City Elec. Ry. Co.
 QUINCY, Ill.....W. B. McKinley, Sec., Quincy Horse Ry. and Carrying Co.
 " "H. E. Chubbuck, Man., Quincy Horse Ry. and Carrying Co.
 " "Frank B. Lee, Supt., Quincy Horse Ry. and Carrying Co.
 QUINCY, Mass.....John R. Graham, Pres. and Gen. Man., Quincy and Boston St. Ry. Co.
 READING, Pa.....John A. Rigg, Pres., United Traction Co.
 " "Samuel E. Rigg, Supt., United Traction Co.
 ROCHESTER, N. Y...J. H. Stedman, Man. of Transfers, Rochester Ry. Co.
 ROCKFORD, Ill.....R. N. Baylies, Pres., Rockford Ry., Light and Power Co.
 " "T. M. Ellis, Gen. Man., Rockford Ry., Light and Power Co.
 SALT LAKE CITY, Utah. Walter P. Read, Supt., Salt Lake City R. R. Co.
 SARATOGA, N. Y....E. A. Noyes, Pres., Saratoga Traction Co.
 " "F. P. King, Gen. Man., Saratoga Traction Co.
 SCHENECTADY, N. Y..J. R. Lovejoy, Dir., Schenectady Ry. Co.
 " " ..W. Gibson Carey, Dir., Schenectady Ry. Co.

- SEATTLE, Wash. Charles F. Wallace, Eng., Seattle Elec. Co.
- SIoux CITY, Iowa. J. Henry Ricker, Sec., Sioux City Traction Co.
- “ “ E. O. Holmes, Supt., Sioux City Traction Co.
- “ “ C. M. Feist, Mast. Mech., Sioux City Traction Co.
- SPOKANE, Wash. L. R. Natbohm, Supt., Washington Water Power Co.
- SPRINGFIELD, Ill. C. K. Minary, Man., Springfield Con. Elec. Ry. Co.
- “ “ T. H. Minary, Elec. Eng., Springfield Con. Elec. Ry. Co.
- SPRINGFIELD, Ohio. John H. Miller, Gen. Man., Springfield Ry. Co.
- ST. JOSEPH, Mich. W. Worth Bean, Pres., St. Joseph and Benton Harbor
Elec. Ry. and Light Co.
- ST. JOSEPH, Mo. W. T. Van Brunt, Vice-Pres. and Gen. Man., St. Joseph
Ry., Light, Heat and Power Co.
- “ “ J. H. Van Brunt, Supt., St. Joseph Ry., Light, Heat and
Power Co.
- “ “ Charles E. Roehl, Elec. Eng., St. Joseph Ry., Light,
Heat and Power Co.
- “ “ T. C. Smallwood, Gen. Foreman Repair Shops, St.
Joseph Ry., Light, Heat and Power Co.
- “ “ O. F. Koss, Foreman Paint Shop, St. Joseph Ry.,
Light, Heat and Power Co.
- ST. LOUIS, Mo. T. C. Kimber, Sec. and Treas., St. Louis and Suburban
Ry. Co.
- “ “ Thomas M. Jenkins, Gen. Man., St. Louis and Suburban
Ry. Co.
- “ “ Herbert O. Rockwell, Asst. to Gen. Man., St. Louis and
Suburban Ry. Co.
- “ “ Nathan Smith, Supt. of Lines, St. Louis and Suburban
Ry. Co.
- “ “ Charles S. Butts, Eng. Main. of Way, St. Louis and Sub-
urban Ry. Co.
- “ “ G. J. Smith, Mast. Mech., St. Louis and Suburban Ry.
Co.
- “ “ George W. Baumhoff, Gen. Man., St. Louis Transit Co.
- “ “ R. M. Douglass, Supt., St. Louis Transit Co.
- “ “ Frank J. Suda, Asst. Aud., St. Louis Transit Co.
- “ “ Frank J. Duffy, Paymaster, St. Louis Transit Co.
- “ “ J. Boyle Price, Pur. Agt., St. Louis Transit Co.
- SYRACUSE, N. Y. Edward G. Connette, Vice-Pres. and Gen. Man., Syra-
cuse Rapid Transit Ry. Co.
- TERRE HAUTE, Ind. G. E. Tripp, Treas., Terre Haute Elec. Co.
- “ “ M. C. George, Elec., Terre Haute Elec. Co.
- “ “ B. N. Grosvenor, Mast. Mech., Terre Haute Elec. Co.
- TOPEKA, Kan. Clifford C. Baker, Pres. and Treas., Topeka Ry. Co.
- “ “ J. G. Slonecker, Sec., Topeka Ry. Co.
- “ “ Joseph M. Patten, Gen. Man., Topeka Ry. Co.

TOPEKA, Kan.....	Charles Blood Smith, Dir., Topeka Ry. Co.
“ “	Albert M. Patten, Pur. Agt., Topeka Ry. Co.
“ “	C. W. Hixon, Supt., Topeka Ry. Co.
“ “	J. H. McCahan, Supt. of Con., Topeka Ry. Co.
TORONTO, Ont.....	J. M. Smith, Gen. Man., Toronto Ry. Co.
TRENTON, N. J.....	John A. Rigg, Vice-Pres., Trenton St. Ry. Co.
“ “	Peter Hurley, Supt., Trenton St. Ry. Co.
VENICE, Ill.....	Fred E. Allen, Pres., Venice, Madison and Granite City Ry. Co.
“ “	E. J. Spencer, Sec., Venice, Madison and Granite City Ry. Co.
WASHINGTON, D. C..	George H. Harries, Vice-Pres., Columbia Ry. Co.
“ “ ..	William F. Ham, Treas. and Aud., Columbia Ry. Co.
WATERBURY, Conn..	Charles M. Heminway, Cashier, Connecticut Lighting and Power Co.
WEBB CITY, Mo....	A. H. Rogers, Pres., South-West Missouri Elec. Ry. Co.
“ “	E. J. Pratt, Elec. Supt., South-West Missouri Elec. Ry. Co.
“ “	H. C. Duvall, Eng., South-West Missouri Elec. Ry. Co.
WESTWOOD, Mass...	John R. Graham, Dir., Norfolk-Western St. Ry. Co.
WILKESBARRE, Pa...	J. A. Rigg, Pres., Wilkesbarre and Wyoming Valley Traction Co.
“ “ ...	T. A. Wright, Supt., Wilkesbarre and Wyoming Valley Traction Co.
WILMINGTON, Del....	John A. Rigg, Pres., Wilmington City Ry. Co.
“ “	A. V. Arrowsmith, Dir., Wilmington City Ry. Co.
WILLOUGHBY, Ohio...	Charles W. Wason, Pres., Cleveland, Painesville and Eastern R. R. Co.
WORCESTER, Mass...	A. H. Stone, Treas., Worcester Con. St. Ry. Co.
YOUNGSTOWN, Ohio...	A. A. Anderson, Gen. Man. and Treas., Mahoning Valley Ry. Co.

REPRESENTATIVES OF NON-MEMBERS.

(ARRANGED ALPHABETICALLY ACCORDING TO CITIES.)

Companies not members of the Association were represented as follows:

BELLEVILLE, Ill....	Robert Skeen, Elec., St. Louis and Belleville Traction Co.
CARROLLTON, Mo....	Frank V. Crouch, Pres., Carrollton Elec. Ry. Co.
CEDAR RAPIDS, Iowa..	Royal H. Holbrook, Ch. Eng., Cedar Rapids and Marion City Ry. Co.
CHICAGO, Ill.....	George B. Henington, Illinois and Rock River Ry. Co.
CLEVELAND, Ohio ...	H. B. Isler, Cleveland, Elyria and Western Ry. Co.

CLEVELAND, Ohio...	William Lintern, Cleveland, Elyria and Western Ry. Co.
DETROIT, Mich.....	J. M. Mulkey, Toledo and Monroe Ry. Co.
EAST ST. LOUIS, Ill....	M. M. Stephens, Collinsville, Caseyville and East St. Louis Elec. R. R. Co.
LEAVENWORTH, Kan....	C. L. Hughes, Cashier, Leavenworth Elec. R. R. Co.
LINCOLN, Neb.....	H. C. Hartley, Pur. Agt. and Supt., Lincoln Traction Co.
NEW YORK, N. Y....	F. W. Toppan, Sec., Bay State Traction Co.
PIQUA, Ohio.....	C. S. Bidwell, Gen. Supt., Miami Valley Ry. Co.
SANDY HILL, N. Y....	F. W. Kinmouth, Supt., Glens Falls, Sandy Hill and Ft. Edward St. R. R. Co.
SAN DIEGO, Cal.....	James Restine, Ch. Elec., San Diego Elec. Ry. Co.
SEDALIA, Mo.....	W. F. Waller, Receiver, Sedalia Elec. and Ry. Co.
“ “	Robert B. Hamner, Supt., Sedalia Elec. and Ry. Co.
SELMA, Ala.....	W. R. Hall, Selma St. and Suburban Ry. Co.
WASHINGTON, D. C..	J. Colvin, Supt., Washington, Arlington and Mt. Vernon Ry. Co.
WAUPACA, Wis.....	Irving P. Lord, Pres., Waupaca Elec. Light and Ry. Co.

TRADE PAPERS.

Representatives of the technical press were in attendance at the meeting, as follows:

ELECTRICAL REVIEW.

Frank E. Colbert.	Stephen H. Goddard
	Charles W. Price.

ELECTRICAL WORLD AND ENGINEER.

J. V. S. Church.	James M. Wakeman.
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STREET RAILWAY JOURNAL.

W. K. Beard.	John B. Bennett.
Henry W. Blake.	James R. Cravath.
James H. McGraw.	C. S. McMahan.

STREET RAILWAY REVIEW.

George A. Barnes.	Charles B. Fairchild, Jr.
Fred S. Kenfield.	Henry J. Kenfield.
Daniel Royse.	Henry H. Windsor.

TRAMWAY AND RAILWAY WORLD.

Charles H. Perrine.

WESTERN ELECTRICIAN.

Charles Sanford Clarke.
C. E. Kammeyer.

W. Forman Collins.
William E. Keily

OFFICIAL STENOGRAPHER.

T. E. Crossman.

MINUTES OF THE LAST MEETING.

President Roach—The next order of business is the reading of the minutes of the last meeting, and unless objection is made the minutes will stand approved as printed. (No objection.)

President Roach—We now extend an invitation to those companies represented at this meeting which do not belong to our Association, to join us if there be any here of that class; or if the representatives of such companies have not time to do this at present, they can do so later by applying to Secretary Penington.

NEW MEMBERS.

(ARRANGED ALPHABETICALLY ACCORDING TO CITIES.)

The following companies then acquired membership:

DALLAS, Texas.....Dallas Consolidated Electric Street Railway Company.
DANVILLE, Ill.....Danville Street Railway and Light Company.
DETROIT, Mich.....Detroit, Rochester, Romeo and Lake Orion Railway Company.
JACKSON, Miss.....Jackson Railway, Light and Power Company.
LEBANON, Pa.....Lebanon Valley Street Railway Company.
MERIDIAN, Miss.....Meridian Street Railroad and Power Company.
NORRISTOWN, Pa.....Schuylkill Traction Company.
NORTH ADAMS, Mass.....Hoosac Valley Street Railway Company.
OTTAWA, Ill.....Ottawa Railway, Light and Power Company.
OTTAWA, Ontario....Ottawa Electric Railway Company.
PHILADELPHIA, Pa...Holmesburg, Tacony and Frankford Electric Railway Company.
PITTSBURG, Pa.....Monongahela Street Railway Company.
ROCKFORD, Ill.....Rockford Railway, Light and Power Company.
SARATOGA SP'GS, N. Y.Saratoga Traction Company.
TERRE HAUTE, Ind...Terre Haute Electric Company.
WOLCOTT, Kan.....Kansas City-Leavenworth Railway Company.

LETTERS AND TELEGRAMS OF REGRET.

President Roach—We have received word from some of the gentlemen who have been very regular in their attendance at the conventions that they will not be with us at this meeting.

The Secretary read the following communications:

Houston, Tex., October 6, 1900.

Mr. T. C. Penington, Secretary, American Street Railway Association:

My Dear Sir—I very greatly regret my inability to be present at the convention of the American Street Railway Association this year to be held in Kansas City. Business engagements in connection with the various street railroad and lighting plants throughout the country which it is my duty to supervise, will prevent my joining in the work and pleasure of the convention this year, but I assure you that I fully appreciate the loss which I sustain by this enforced absence.

I beg you will accept my best wishes for the complete success of this yearly gathering of the Association in all its different lines of study, discussion and social pleasure, and I ask you to convey my personal regards to your associate officers and the delegates in attendance. For yourself, receive my thanks for courtesies already extended and my congratulations in advance upon a renewal for 1901 of your present official position. Very truly yours,

C. D. WYMAN.

Baltimore, Md., October 13, 1900.

Mr. T. C. Penington, Secretary, American Street Railway Association:

Dear Sir—I want to extend to you and the officers and members of the Association my apologies and sincere regrets at being unable to attend the Kansas City meeting and to read the paper referred to me. As you know I have been ill since July and returning a few weeks ago convalescent I expected to be with you up to a few days ago when my physicians advised me I would have to undergo a surgical operation at once.

I am now writing you from my bed but felt I must express to you my disappointment and chagrin, which I trust you will convey to the other members of the committee.

I expect to be in the West before many weeks. I will call on you in Chicago. Very truly,

NICHOLAS S. HILL, JR.

[TELEGRAM.]

Regret my inability to be present at convention. Kind regards and best wishes to all,

ALBION E. LANG.

[TELEGRAM.]

Regret I cannot be with you. Trust you will have a pleasant and profitable meeting.

JULIUS S. WALSH.

[TELEGRAM.]

Regret exceedingly that I cannot be with you. Kind remembrances to all.

H. M. WATSON.

President Roach—The next business before the meeting is the address of the President.

ADDRESS OF THE PRESIDENT.

President Roach read the following address:
The American Street Railway Association—

Gentlemen: It gives me great pleasure to meet with you in this magnificent Western city. I have every assurance that nothing will be left undone to make our visit most pleasant and profitable. There is a breadth of character and freedom of personality in this young metropolis of the plains which peculiarly appeals to the business man who has large interests entrusted to his care, and I believe the members of this Association will show their appreciation of the many pleasant things provided for their entertainment while in this community. When this nineteenth annual convention of the American Street Railway Association shall have finished its labors, I am sure I may safely say to Mayor Reed that none of you will have regretted the acceptance of the hospitality of the people of Kansas City, so graciously extended by him.

I see before me representative men from the leading cities of this country. To your hands is entrusted street railway investments aggregating hundreds of millions of dollars and the welfare of over a million persons. From the single track one-horse car of forty years ago the business in which you are engaged has grown to a magnificence where nearly all fields of human endeavor are called upon to perfect its equipment or aid in its management. It has outgrown ridicule and financial instability, and in the rapid whirl of events has built cities, enriched its promoters and made possible a freer, healthier and happier life for its patrons. Each day the street car is entering more and more into the business life and pleasures of the community and each day its benefits are becoming more apparent to the general public.

The street railways of America now represent the enormous investment in bonds and stocks of one billion, eight hundred million dollars (\$1,800,000,000), upon which investors are receiving annually over seventy million dollars (\$70,000,000) in dividends and interest. Salaries and wages amounting to two hundred and fifty million dollars (\$250,-

000,000) a year are distributed among the three hundred thousand (300,000) employes necessary to equip, operate and manage this great industry; repair its twenty thousand (20,000) miles of track, handle its sixty thousand (60,000) cars and meet the ever pressing demands for improvement. Directly and indirectly over one million, two hundred thousand (1,200,000) persons depend upon the traction interests of America for their livelihood.

An industry of such proportions penetrates, and more or less affects, all other enterprises in the country which sustains it. Nineteenths of the business men and women of the United States look to the management of street railway companies to furnish them with swift, comfortable and safe transportation to and from business. Still a greater percentage of pleasure seekers demand and receive from the same management to and from theater, casino, park and suburb transportation of such elegance of equipment and efficiency in service as to satisfy the most exacting. It has required heroism and patience on the part of street railway men, with so little friction, to meet the demands of a critical patronage in so excellent a manner as is being accomplished by them at the present time.

On all sides we hear the cry of improvement, and in every direction we hear the sound of the busy car shop as it responds to the demand for more modern equipment. The public is becoming more exacting and there is need for the most perfect knowledge and the widest experience to successfully cope with the ever changing situations which confront the street railway manager. Street railway companies have frequently, at great cost, increased their miles of tracks and added to an expensive equipment, primarily for the sole purpose of accommodating the public, by penetrating into outlying districts, which was unwarranted by additional business to be acquired in such territory. This policy has proved wise in nearly every instance. It requires considerable pluck on the part of a company to back a temporary loss in order to please its patrons. Those companies which have pursued such a course have generally been rewarded by more liberality on the part of municipalities, more good nature and praise from patrons, and an early increase of business in the new districts acquired, which soon brought those lines to a paying basis.

In thus catering to the wishes of the public the street railway industry of the United States has been brought to a high standard of excellence and has kept safely in advance of traffic. The aggregate of miles of track has grown from a few hundred miles of single track, confined mainly to business centers, to many thousands of miles of thoroughly equipped double tracks, which have brought the country districts within quick and active touch with the larger cities. Such energy and management must and will be appreciated and fairly treated by the communities benefited.

It may be declared that corporations are without souls, but it cannot truthfully be said that street railway corporations are lacking in good sense or business principles. False economic doctrines yield to and flee before rapid development and prosperity. A well equipped street railway with modern service, which seeks to oblige the people, operated in any community, will develop the best resources thereof and bring prosperity to its people with such rapidity as to utterly confuse and put to flight all false economic doctrines.

Newspapers, reviews, magazines, periodicals and journals of this country, indeed of many parts of the world, are entitled to the thanks of this Association for the fair and generous treatment accorded in their columns to the street railway men and their interests during the year. It is the province of these publications to exploit the great industries of the land. If upon one day we are able to congratulate ourselves upon their unstinted praise, we should patiently bear the publicity of our faults, if any there be, in the next issue.

The last year has been a period of notable activity and healthy progress, with but few disturbances of a serious nature. The managers of large street railway properties should shape their policy toward their employes, and the public, so that disturbances between employer and employe will be entirely eliminated from their history. The management of the great corporations of the country can best retain the adherence and loyalty of employes by adopting toward them a policy at all times just, and at the same time courteous, kind and conciliatory. The good will of your employes and of your patrons will be found an asset of great value in the days of trouble and most desirable at all times.

A business so widespread in its usefulness, holding and judiciously employing, as it does, so great a portion of the capital of the country, and so essential to the best interests and prosperity of the trade centers, should, and I believe in good time will, possess the very necessary good will and hearty support of the municipalities it so faithfully serves. Our interests and those of the public are inseparably interwoven and naturally harmonious. If such interests become strained and in conflict, such conditions are unnatural and illogical, and, therefore, it should become one of the leading features of our Association to suggest a uniform policy for street railway companies, of so broad a gauge that the mutuality of the best interests of the public and of the company shall be as apparent to the people as to the street railway managers themselves.

I take pride in announcing that the condition of your Association, both as to membership and finances, is improving each year. I wish to urge you to make this gathering of use to our Association and of importance to the street railway industry. This may be accomplished by a full attendance upon and participation in the business meetings.

The Executive Committee has selected members who have prepared papers on important subjects and I urge upon you the advisability of entering into full discussion and analyses of these subjects, so that a clear understanding of all questions presented may be carried home with you. I also urge the Association to show appreciation for our friends, the Supply Men, who have produced for this annual meeting their splendid exhibit.

Allow me to request your hearty support in the work of the Accountants' Association, which meets in annual convention here at this time. Its work is of great importance and is worthy of your most serious consideration.

To the Secretary and members of the Executive Committee our thanks are due for the satisfactory manner in which they have assisted in conducting the affairs of this Association. Personally, their efforts have been highly appreciated.

The honor of having acted as your President for the last year has been most gratifying to me and shall ever remain one of the pleasant recollections of my life as a street railway man. For my successor I bespeak the same courtesy and cordial co-operation which it has been my good fortune to enjoy. Gentlemen, I thank you. [Applause.]

President Roach—The next business in order is the report of the Executive Committee.

REPORT OF THE EXECUTIVE COMMITTEE.

The Secretary read the report, as follows:

To the American Street Railway Association—

Gentlemen: The report of your Executive Committee will consist, as in past years, of the minutes of the several meetings held during the year, which will show what has been done by your committee:

MINUTES OF SPECIAL MEETING OF THE EXECUTIVE
COMMITTEE HELD AT THE MIDLAND HOTEL,
KANSAS CITY, MO., FEBRUARY 5 AND 6, 1900.

MONDAY'S SESSION.

The President called the meeting to order at 11 o'clock, A. M.

Present: John M. Roach, President; Frank G. Jones, John R. Graham, N. S. Hill, Jr., C. W. Wason and T. C. Penington, Secretary and Treasurer.

The Secretary read letters from John A. Rigg, H. H. Vreeland and C. S. Sergeant, regretting their inability to be present at the meeting.

The Secretary read a letter from C. K. Durbin, dated Denver, Colo., January 29th, 1900, tendering his resignation as a member of the Executive Committee of the American Street Railway Association.

On motion of Mr. Wason, seconded by Mr. Jones, the resignation of C. K. Durbin as a member of the Executive Committee was accepted.

Mr. Jones moved that Walton H. Holmes, President of the Metropolitan Street Railway Company, Kansas City, Mo., be elected to fill the vacancy in the Executive Committee.

The motion was unanimously carried and Mr. Walton H. Holmes was elected to succeed Mr. Durbin as a member of the Executive Committee for the ensuing year.

The Secretary-Treasurer presented a financial report of the condition of the funds of the Association to date; also a list of members in arrears for dues, and amount of exhibit space at Chicago, remaining unpaid. On motion, the report was received and placed on file.

Mr. Wason moved that all members in arrears for dues for more than two years be served by the Secretary with a written notice, that if these back dues are not paid by September 1st, 1900, the Executive Committee will recommend to the Association that such members be expelled, in accordance with the provisions of Article XIX. of the by-laws; and that the Secretary shall quote the provisions of said Article XIX. in his communication to such delinquent members.

The motion was unanimously carried.

The renewal of the Treasurer's bond, issued by the American Surety Company of New York, in the amount of five thousand dollars (\$5,000), renewed to February 1st, 1901, was presented to the committee by that officer and placed in the possession of the President. The original bond of said company dated February 1st, 1898, was delivered to President Roach by Mr. Sergeant, previous to this meeting.

At the suggestion of Mr. Penington, Mr. Jones moved that inasmuch as the funds now in the hands of the Treasurer, exceed the amount of the present bond, that said bond be increased to the sum of ten thousand dollars (\$10,000).

Motion carried.

Mr. Graham moved that the salary of the Secretary-Treasurer be continued at \$1,500 per annum, as in past years.

Motion carried.

Mr. Jones moved that the last day of the convention be set aside for the systematic and careful inspection of the exhibits by the members; that the banquet be given on the last day of the convention, namely, Friday night; and that the newly-elected officers be installed at the banquet.

Motion carried.

It was moved by Mr. Jones, seconded by Mr. Wason, that non-

members be not entitled to the Association Button at the convention.

Motion carried.

It was moved by Mr. Wason, seconded by Mr. Jones, that the payment of the admission fee of \$25.00 be waived to any company becoming a member of this Association prior to October 1st, 1900, provided the annual dues of \$25.00 to October, 1900, be paid at the time application for membership is made.

Motion carried.

At this point a recess was taken for luncheon, and for the purpose of visiting the Convention Hall, where it is proposed to hold the convention.

RECONVENED.

After visiting the Convention Hall with the Local Committee, the committee reconvened at 3:20 P. M.

Mr. Hill moved that the nineteenth annual meeting of the American Street Railway Association be held on October 16, 17, 18 and 19, 1900, at Convention Hall in Kansas City, Mo., with the understanding that the hall shall be put in proper condition for the display of the exhibits and for the requirements of the meeting of the American Street Railway Association and the Street Railway Accountants' Association of America, as agreed to be done by the Local Committee; the hall to be properly cleaned, heated and lighted, and to be furnished with necessary electric power; all to be done without expense to the Association.

Motion carried.

Mr. Graham moved that the price for space in the Exhibit Hall shall be ten cents per square foot, as in previous years.

Motion carried.

Mr. Jones offered the following resolutions:

That the authority to inspect and approve all papers to be read before the convention be vested in the President and Secretary.

That the President and Secretary be authorized to perform any necessary work that will properly devolve upon the Executive Committee between now and the next meeting.

Without objection, said resolutions were adopted.

On motion, the meeting adjourned until 11 o'clock Tuesday morning.

TUESDAY'S SESSION.

The meeting was called to order by the President at 11:15 A. M.

Present: Same as before.

Mr. George T. Stockham, Manager of the Midland Hotel, appeared before the committee, and stated that regular rates would be charged during the convention, namely, \$1.00 to \$5.00, European plan, and from \$3.00 to \$8.00, on the American plan, for one person.

On motion of Mr. Wason, seconded by Mr. Hill, the Midland Hotel was selected as the headquarters of the Association for the next convention.

The following subjects were selected, upon which papers should be prepared for the next meeting:

1. "Double Truck Cars; How to Equip Them to Obtain Maximum Efficiency under Varying Conditions," N. H. Heft, President, Meriden Electric Railroad Company, Meriden, Conn.

2. "A Comparison of the Various Systems of Electrical Distribution for Street Railways," C. F. Bancroft, Electrical Engineer, Massachusetts Electric Companies, Boston, Mass.

3. "Consolidation of Street Railways and Its Effect upon the Public," Daniel B. Holmes, Counsel, Metropolitan Street Railway Company, Kansas City, Mo.

4. "The Store Room and Store Room Accounts," N. S. Hill, Jr., General Manager, Charleston Consolidated Railway, Gas and Electric Company, Charleston, S. C.

5. "Painting, Repainting and Maintenance of Car Bodies," F. T. C. Brydges, Superintendent of Car Shops, Chicago Union Traction Company, Chicago, Ill.

Without objection, the following motion was adopted:

The President shall have the authority to select some one to write the papers above mentioned, providing the person selected declines.

On motion of Mr. Wason, seconded by Mr. Hill, the meeting of the Executive Committee was adjourned, subject to the call of the chair.

MINUTES OF SPECIAL MEETING OF THE EXECUTIVE
COMMITTEE, HELD AT THE MIDLAND HOTEL,
KANSAS CITY, MO., OCTOBER 15, 1900.

The President called the meeting to order at 11:15 o'clock, A. M.

Present: John M. Roach, President; John A. Rigg, Frank G. Jones, Charles W. Wason, Walton H. Holmes, and T. C. Penington, Secretary and Treasurer.

The Secretary read telegrams from Mr. Herbert H. Vreeland, Mr. Charles S. Sergeant and Mr. John R. Graham, members of the Executive Committee, stating that they would not reach Kansas City until Monday evening, owing to the train on which they were coming to Kansas City being late.

The Secretary read a telegram from Mr. Nicholas S. Hill, Jr., a member of the Executive Committee, to the effect that Mr. Hill was ill and could not attend the convention.

The Secretary read the minutes of the special meeting of the Executive Committee held February 5 and 6, 1900.

Mr. Rigg moved that the minutes of the last meeting of the Executive Committee be approved as read.

Motion carried.

The Secretary read the report of the Secretary and Treasurer.

Mr. Rigg moved that the report be approved.

Carried.

The President appointed Messrs. Wason and Rigg as an Auditing Committee to examine the accounts of the Treasurer.

The Secretary stated that he had notified the Great Falls Street Railway Company, of Great Falls, Montana and the Lock Haven Traction Company, of Lock Haven, Pa., that they were in arrears for dues for more than two years, in accordance with the action taken at the last meeting of the Executive Committee, but that he had not received any reply from either of said companies.

Mr. Wason moved that the two companies named be dropped from the roll of membership.

Motion carried.

The Auditing Committee then presented the following report:

Kansas City, Mo., October 15, 1900.

We have examined the report of the Treasurer, Mr. T. C. Pennington, for the past year, and find the same correct, as appears by proper vouchers accompanying the same.

JOHN A. RIGG,
CHARLES W. WASON,
Auditing Committee.

Mr. Jones moved that the report of the Auditing Committee be accepted and the committee discharged.

Motion carried.

On motion of Mr. Jones, it was voted that the Executive Committee recommend to the convention the adoption of the following rules:

RULES OF THE CONVENTION.

1. No member will be recognized by the President unless he shall announce distinctly his name and address.
2. Speeches will be limited to ten minutes, unless the time shall be extended by the convention.
3. Members who desire to offer resolutions or other matters to be considered by the convention, are requested to submit them in writing over their signatures, to the Secretary.

Mr. Rigg moved in regard to the banquet tickets, that the custom of former years be followed, to-wit: There shall be two tickets issued to each member company of the Association when there are two or more official representatives at the meeting; when there is only one representative at the meeting, only one ticket, and when a company is not

officially represented, no ticket shall be issued on account of said company.

Motion carried.

Mr. Rigg moved that in view of the satisfactory condition of the finances of the Association, the admission fee be waived in the case of any company joining the Association during the present meeting.

Motion carried.

The President appointed Messrs. Rigg and Wason as a Committee on Memorials of Deceased Members.

On motion, adjourned.

President Roach—Gentlemen, you have heard the report of the Executive Committee. What is your pleasure?

Mr. Dyer, Augusta—I move that the report of the Executive Committee be adopted as read. (Carried.)

Mr. McCulloch, Chicago—Mr. President and Gentlemen: I think it is due to Mr. Durbin to state why he resigned his membership on the Executive Committee. Those of us who know him know he is not in the habit of shirking responsibilities. He has gone out of the street railway business.

The Secretary—Mr. Durbin has gone out of the street railway business, and did not think he ought to continue to hold his office as a member of the Executive Committee.

President Roach—We will now hear the report of the Secretary and Treasurer.

REPORT OF THE SECRETARY AND TREASURER.

The Secretary read the report as follows:

To the American Street Railway Association—

Gentlemen: Your Secretary and Treasurer respectfully submits the following report:

Cash in Bank October 10, 1899.....\$ 5,658.87

RECEIPTS TO OCTOBER 10, 1900.

Annual Dues	\$ 3,950.00	
Membership Fees	250.00	
Space, Exhibit Hall, 1899.....	2,171.30	
Space, Exhibit Hall, 1900.....	47.00	
Interest on Deposits	146.25	\$ 6,564.55
		<hr/>
		\$12,223.42

Nineteenth Annual Meeting.

EXPENSES TO OCTOBER 10, 1900.

Printing and Stationery.....	\$	948.02	
Postage		162.00	
Salaries		1,500.00	
Miscellaneous Expenses		50.00	
Executive Committee, 1900.....		653.26	
18th Annual Convention, 1899.....		1,596.96	
19th Annual Convention, 1900.....		312.43	\$ 5,222.67
			<hr/>
Cash in Bank October 10, 1900.....			\$ 7,000.75
			<hr/>
			\$12,223.42

CERTIFICATE OF BALANCE.

Chicago, October 9, 1900.

I hereby certify that the balance due American Street Railway Association on the books of the Continental National Bank of Chicago at the close of business on the ninth day of October, 1900, was Seven thousand and seventy-five one-hundredths dollars.

\$7,000.75.

IRA P. BOWEN,
Asst. Cashier.

CERTIFICATE OF AUDITING COMMITTEE.

Kansas City, Mo., October 15, 1900.

To the Executive Committee, American Street Railway Association—

Gentlemen: We have examined the report of the Treasurer, T. C. Penington, for the past year, and find same correct, as appears by proper vouchers accompanying the same.

JOHN A. RIGG,
CHAS. W. WASON,
Auditing Committee.

October, 1895.....\$5,000 in debt
October, 1900.....\$7,000 in bank

MEMBERSHIP.

October 11, 1899.....	165
Members since last meeting.....	32
	<hr/>
	197

LOSS.

Suspended	3
Withdrawn	31
	<hr/>
Membership October 10, 1900.....	163

NEW MEMBERS.

The following companies acquired membership at and since the last meeting :

Asbury Park, N. J....	Atlantic Coast Railroad Company.....
Atchison, Kan.....	Atchison Railway, Light and Power Company.....
Aurora, Ill.....	Aurora Street Railway Company.....
Bridgeton, N. J.....	Bridgeton and Millville Traction Company....
Chicago, Ill.....	Chicago Electric Traction Company.....
Columbia, Pa.....	Conestoga Traction Company.....
Dayton, O.....	Dayton and Western Traction Company.....
Detroit, Mich.....	Detroit and Pontiac Railway Company.....
Elgin, Ill.....	Elgin City, Carpenterville and Aurora Rail- way Company
Fond du Lac, Wis....	Fond du Lac Street Railway and Light Com- pany
Ft. Wayne, Ind.....	Ft. Wayne Traction Company.....
Galesburg, Ill.....	Galesburg Electric Motor and Power Company
Hamilton, Ohio.....	Cincinnati and Hamilton Electric Street Rail- way Company
Highwood, Ill.....	Chicago and Milwaukee Electric Railway Com- pany
Joliet, Ill.....	Joliet Railway Company.....
Kansas City, Mo....	East Side Electric Railway Company.....
Knoxville, Tenn....	Knoxville Traction Company.....
Montreal, Canada...	Montreal Street Railway Company.....
Oakland, Cal.....	Oakland Transit Company.....
Pasadena, Cal.....	Los Angeles and Pasadena Electric Railway Company
Peoria, Ill.....	Peoria and Pekin Terminal Railway Company
Pittsburg, Pa.....	Consolidated Traction Company.....
Pueblo, Col.....	Pueblo Traction and Electric Company.....
Schenectady, N. Y...	Schenectady Railway Company.....
Seattle, Wash.....	Seattle Electric Company.....
Sioux City, Ia.....	Sioux City Traction Company.....
South Bend, Ind....	Indiana Railway Company.....
St. Louis, Mo.....	St. Louis Transit Company.....
Venice, Ill.....	Venice, Madison and Granite City Railway Company
Vicksburg, Miss....	Vicksburg Railroad, Power and Light Company
Westwood, Mass....	Norfolk-Western Street Railway Company....
Willoughby, Ohio....	Cleveland, Painesville and Eastern Railroad Company

MEMBERS SUSPENDED.

The following members were suspended for non-payment of dues:

Newburyport, Mass..Newburyport and Amesbury Street Railway
Company
Steelton, Pa.....Middletown, Highspire and Steelton Railway
Company
West Superior, Wis..Superior Rapid Transit Railway Company....

MEMBERS WITHDRAWN.

The following members have withdrawn during the past year, in nearly every case owing to consolidations:

Atlanta, Ga.....Atlanta Railway Company.....
Baltimore, Md.....Baltimore City Passenger Railway Company...
Bridgewater, Mass...Brockton, Bridgewater and Taunton Street
Railway Company.....
Buffalo, N. Y.....Buffalo Traction Company.....
Cleveland, O.....Akron, Bedford and Cleveland Railway Com-
pany
Covington, Ky.....South Covington and Cincinnati Street Railway
Company.
Denver, Col.....Denver City Railway Company.....
Derby, Conn.....Derby Street Railway Company.....
Detroit, Mich.....Wyandotte and Detroit River Railway Company
Girardville, Pa.....Schuylkill Traction Company.....
Gloucester, Mass....Gloucester Street Railway Company.....
Manchester, N. H....Manchester Street Railway Company.....
New Britain, Conn...Connecticut Lighting and Power Company...
New York, N. Y....Nassau Electric Railroad Company.....
Niagara Falls, N. Y..Niagara Falls and Suspension Bridge Railway
Company
N. Tonawanda, N. Y..Buffalo and Niagara Falls Electric Railway
Company
Norwalk, Conn.....Connecticut Lighting and Power Company....
Paterson, N. J.....Paterson Railway Company.....
Pueblo, Col.....Pueblo Traction and Electric Company.....
Racine, Wis.....Belle City Railway Company.....
St. Louis, Mo.....Cass Avenue and Fair Grounds Railway Com-
pany
“ “Citizens' Railway Company.....
“ “Lindell Railway Company.....
“ “Missouri Railroad Company.....
“ “Southern Electric Railroad Company.....
“ “St. Louis Railroad Company.....
“ “Union Depot Railroad Company.....
Taunton, Mass.....Providence and Taunton Street Railway Com-
pany

Taunton, Mass.....	Taunton Street Railway Company.....
Wakefield, Mass.....	Mystic Valley Street Railway Company.....
Wakefield, Mass.....	Wakefield and Stoneham Street Railway Com- pany

MEMBERS DUES UNPAID.

Anderson, Ind.—Union Traction Company.....	\$ 25.00
Great Falls, Mont.—Great Falls Street Railway Company.....	75.00
Lansing, Mich.—Lansing City Electric Railway Company.....	50.00
Lock Haven, Pa.—Lock Haven Traction Company.....	75.00
Portland, Me.—Portland and Yarmouth Electric Railway Com- pany	25.00
Portsmouth, Va.—Portsmouth Street Railway Company.....	50.00
	<hr/>
	\$300.00

SPACE IN EXHIBIT HALL, 1899, UNPAID.

Cling Surface Manufacturing Company, Buffalo.....	\$ 15.00
Eureka Electric Company, Chicago.....	7.50
Power Track Cleaner Company, Toronto.....	5.00
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	\$ 27.50

DEATHS DURING THE YEAR.

PHILIP T. BEGLEY, Superintendent, Lowell and Suburban Street Railway Company, Lowell, Mass.	December 24, 1899.
AMOS BREED, President, Lynn and Boston Railroad Company, Lynn, Mass.	May 22, 1900.
GARRETT A. HOBART, President, Paterson Railway Company, Paterson, N. J.	November 21, 1899.
JOHN McNULTA, Receiver, Calumet Electric Street Railway Company, Chicago, Ill.	February 22, 1900.
VOLNEY C. TURNER, Ex-President, North Chicago Street Railway Company, Chicago, Ill.	December 2, 1899.
J. H. VANDER VEER, Superintendent of Motive Equipment, Brooklyn Heights Railroad Company, Brooklyn, N. Y.	December 3, 1899.

President Roach—Gentlemen, what action will you take upon the report of the Secretary and Treasurer?

Mr. Graham, Quincy—I move that the report be received and placed on file. (Carried.)

President Roach—The Secretary has an announcement to make.

The Secretary—The Kansas City Club and the Elks Club extend a cordial invitation to all the delegates to visit their club rooms. The badges will admit the members of this Association.

President Roach—The next business before the convention will be the reading of a paper by Mr. Daniel B. Holmes, counsel of the Metropolitan Street Railway Company, Kansas City, Mo., on the subject, "Consolidation of Street Railways and Its Effect Upon the Public."

CONSOLIDATION OF STREET RAILWAYS AND ITS EFFECT UPON THE PUBLIC.

Mr. Holmes read the following paper:

Mr. President and Gentlemen: It is no part of the purpose of this paper to enter into an extended discussion of street railway consolidations from a legal point of view. It is assumed that no considerable number of those present would be particularly interested in that branch of the subject. Suffice it to say that the laws of nearly, if not quite, all of the States of the Union are in such condition that practical street railway consolidation may be brought about and made effective by union of companies as a technical consolidation, or by purchase and sale of the corporate property or capital stock, or by common ownership of the corporate shares of several companies, or in other ways which might be mentioned. Whenever consolidation is desired by the parties in interest it may be safely assumed that counsel learned in the law will find little or no difficulty in pointing out the way in which that end may be legally accomplished.

Street railway companies may be properly classified as public service corporations, and whenever a union of several such companies takes place, it at once becomes obvious that the interests of the capital invested and of the traveling public may and probably will be positively affected thereby. Therefore, these two interests will form the chief basis of what I have thought proper to lay before this convention of practical street railway men, whose calling is such that they never feel at liberty to disregard either the best interests of their stockholders or the welfare of the dear public, whose constant servants they are. And I may be permitted to add, in the light of an experience

and intimate association with street railway managers extending over a period of upwards of twenty years, that no class of men with whom I have come in contact in the active practice of a profession which brings about the most intimate relations with all sorts of men, are so constantly mindful of the best interests of the public they serve, by night and by day, as the street railway men. I am the more pleased to make this acknowledgment because the street railway man has so many impatient masters among the traveling public that he is much more often the subject of unjust criticism than of the well deserved encomiums he would surely receive if the difficulties of his situation and his conscientious efforts to faithfully discharge his company's duty to the public were even half-way understood. Above all men it is his lot to bear the "whips and scorns of time," and if he will but pin his faith to the teachings of the Good Book he may expect to receive hereafter that reward which in but few cases, I am sorry to say, comes in this life in the shape of an adequate salary for so hard and thankless a job.

That the consolidation of street railway interests affords opportunities for the introduction of many various economies is a truth which is almost axiomatic, and this may be fairly said to have been the controlling consideration which has inspired and accomplished the many consolidations which have taken place in various parts of the country. By this process the managerial force is greatly reduced and the salary list largely diminished. Where three or four presidents, managers or superintendents were required for the successful management of the separate properties, but one officer of each kind is needed in their united state, and while he receives more salary than any one of his predecessors, as of right he ought, because of enlarged duties and more weighty responsibilities, still there is substantial saving over what was previously paid.

But there is in this connection a still more important consideration. As is the case with any other calling in life, the supply of really first class street railway managers is more or less limited, and the larger salary offered by the consolidated interests naturally commands, and in all probability secures, a higher order of talent than the separate properties could retain even where it had been fortunately possessed. In this way the consolidated properties are in nearly every instance managed with much greater ability than was shown by the management of the disconnected parts, and this is a positive gain, the value and importance of which can scarcely be estimated. This successful manager, you may be sure, is truly a remarkable man. The relations existing between street car companies, on the one hand, and the municipality or its citizens, on the other, are the fruitful source of jealousies and complications constantly arising which can be successfully disposed of by nothing short of the possession

of genius for diplomacy, and for affairs and finance, all at the same time, in order to be able to satisfy the demands of the public without involving the company in irretrievable financial ruin.

In most instances, the consolidation of street railway properties creates opportunities for marked reduction in the cost of generating motive power. Location is a most important consideration as regards the power station. Unless the power station is so situated that both fuel and water can be delivered to it at a minimum cost, the highest degree of economy in developing motive power is altogether impossible. This is greatly facilitated by the union of properties, since the car lines are so situated in most cities that but few of them, if independent, could operate from power stations located near steam railroad switches and water courses. A greater or less number of high priced employes are always necessary around every power station, whether large or small, and this is an expense which is greatly curtailed by generating as much power as it is practicable to handle from one station. A company possessed of an extensive system with large mileage has thus presented to it the opportunity of producing power at a minimum cost, a thing altogether impossible on a short line railroad.

But perhaps the most important result from consolidating street railway lines is the great stimulus it affords to street railway traffic. Outside of a few of the very large cities, where the problem is, not how to get business, but how to successfully handle that business which of necessity must come to the car lines, the street railway companies are quite generally engaged in efforts of all kinds to create travel on the lines artificially by offering to the public attractions of various and sundry kinds. This is all well enough, but one of the most effective means to this end is the consolidation of the street car lines. I believe it is the uniform experience that the aggregate travel on the united lines exceeds by a large percentage the business formerly done by the separate properties. This is partially accounted for by the fact that short distances are now ridden which were formerly walked because two fares were then necessary in order to ride, and this was considered too great an outlay for the accommodation afforded.

But how stands the case with the public? I am altogether sure it is no different. Indeed, the immediate benefit to those who ride upon the cars far exceeds the increased returns to the consolidated company. Where before the union two, and even three, fares, in some instances, had to be paid in order to convey the passenger to his destination, he may now make the same journey for a single fare by means of transfers and through cars which were previously impossible. Taking Kansas City as an example, fifty per cent. of all the passengers who ride on the cars make at least one transfer in every journey, so that it may be truly said that 60,000 passengers save five cents each and every day in the year in Kansas City alone, and this saving

is due solely and directly to the consolidation which took place only a few years ago. And who are the people thus benefited? Chiefly the laboring classes who can least afford to spend their hard earned gains unnecessarily. The sons of toil who were formerly compelled to shelter their wives and rear their children in the polluted air and noise and smoke, because unable to pay more than a single fare in going to and from their vocations, can and do now dwell in neat little cottages in the suburbs, where loved ones breathe the pure air of heaven and bask in the sunshine of life all the day long, and when eventide comes, smiles and mirth and joy are the companions who have taken the place of sickness, suffering and grief. Who can estimate the value of blessings like these? If the public welfare is the first and highest duty of the State, who can gainsay the immense value to the public of street railway consolidations, and who can say that the State ought to throw any obstacles in their way?

But it is said that competition is the life of trade, and that monopolies are odious. Accepting these as general truths, let us see how it is with street railroads. Except to a very limited and unimportant degree, there is no such thing as competition in street railroads, and their consolidation is entirely devoid of any objectionable feature of a monopoly. In the very nature of things, street railroads are seldom competitors in business. They were never known to compete in rates, and can only be laid on such public highways as the authorities may determine. The necessity for keeping some streets open for ordinary vehicle traffic keeps the street railroads sufficiently far apart, as a rule, to eliminate any matter of choice on the part of the intending passenger. Each line supplies and accommodates its own peculiar territory, and there is no real choice, and hence no real competition. As to rates, these are universally fixed by the franchise ordinances. They are the same on all the roads, so that the intending passenger is moved in his choice solely by considerations of convenience to himself. In short, he simply takes the line which carries him to his destination with the least inconvenience. Monopolies are only odious when of a character that they do or have the power to fix their own price for what they alone can sell. Not so with the consolidated street railway. So far from having the power to increase the cost of travel, consolidation always results in a practical reduction of cost by giving to the passenger the right to ride for the same single fare the increased distance brought about by the consolidation. No thoughtful man would condemn a street railway consolidation, because it neither stifles competition nor increases cost of travel, nor creates a monopoly, as that term is generally understood.

There can be no doubt that consolidations of this character are greatly beneficial both to invested capital and to the public at large. And happily this is so, because the public is never so likely to have

its wants provided for as when it is to the interest of capital to do so. There is no tie so strong as common and mutual interest. This is a principle which would render many conflicts and controversies impossible, if kept always in mind and strictly adhered to in all dealings between public service corporations and the municipality in which they dwell. I commend it to the thoughtful consideration of all who are assembled in this convention, as the firm foundation on which aggregations of capital may safely rest, the Gibraltar of justice and right, garrisoned by an always sound and healthy public sentiment, against which the assaults of prejudice, passion and demagoguery would be hurled in vain.

Respectfully submitted,
DANIEL B. HOLMES.

President Roach—Gentlemen, you have heard the paper read by Mr. Holmes. What action will you take in regard to it.

Mr. Rigg, Reading—I move that it be received and spread upon the minutes; and that we tender Mr. Holmes a vote of thanks for the interesting paper. (Carried.)

President Roach—Mr. Holmes, I desire on behalf of the Association, and personally, to thank you for the very able and distinct manner in which you treated the subject embraced in your paper.

Mr. Holmes—I appreciate the compliment very much.

President Roach—Is there any gentleman present who would like to discuss the paper just read? We would be glad, if anyone has anything to say, to hear from him. I imagine the gentleman has treated the matter so comprehensively and in such a diplomatic manner there is very little additional that can be said. It is natural, under such circumstances, as he seems to have covered the ground so fully, for us to have passed this vote of thanks to him.

ANNOUNCEMENT OF ENTERTAINMENT.

The Secretary—There will be a reception this evening at the Midland Hotel, at half-past eight o'clock, at which all the delegates and ladies, and others in attendance upon the convention, are invited to be present.

On motion, adjourned until 10 o'clock Wednesday morning.

WEDNESDAY'S SESSION.

President Roach called the meeting to order at 10:50 A. M.

President Roach—Gentlemen, the Secretary has some invitations, which he will read.

The Secretary read the following invitations:

INVITATION FROM THE COUNTRY CLUB.

The Country Club,
October 16, 1900.

The American Street Railway Association, Accountants' Association and Supply Men, Convention Hall, Kansas City, Mo.—

Gentlemen: You are very cordially invited to become the guests of the Country Club at any time that will suit your convenience during your stay in Kansas City. The privileges of the golf links will be extended to you, and it is hoped that as many of you as possible will use them.

Yours truly,

H. L. HARMON,
President.

INVITATION FROM THE EAST SIDE ELECTRIC RAILWAY COMPANY.

Kansas City, Mo.,
October 16, 1900.

The American Street Railway Association—

Gentlemen: You are cordially invited to visit the plant and park of the East Side Electric Railway Co. The trip will include a visit to the ice plant and beer making plant of the Ferd. Heim Brewing Co. The cars will be at Fifth and Walnut streets at 9:30 Friday morning. Your badges entitle you to free transportation. We can promise that you will be well repaid for the time and trouble of the trip.

Respectfully yours,

W. O. HANDS,
General Manager.

INVITATION TO INSPECT THE BOILER EQUIPMENT OF
THE AMERICAN STOKER COMPANY.Kansas City, Mo.,
October 16, 1900.

The American Street Railway Association—

Gentlemen: Through the courtesy of the Cudahy Packing Company, Mr. Spaulding, of the American Stoker Company, invites all who are interested in coal pile economies to visit the power plant of the above concern, the boilers of which are equipped throughout with American stokers.

Take Twelfth street cars to terminus of line; then electric cars across the river, and get off at the first group of stacks on the left which are *not* emitting black smoke.

APPOINTMENT OF THE COMMITTEE TO NOMINATE
OFFICERS AND SELECT THE PLACE FOR
HOLDING THE NEXT MEETING.

President Roach—For reasons unnecessary to explain at this time, we have changed the order of business somewhat. The members of the Committee on Nominations have been selected, and the Secretary will now read the names. This Committee will also recommend to the Association a place for our next meeting.

The Secretary read the names of the Committee on Nominations, as follows: Chairman, John A. Rigg, Reading, Pa.; E. C. Foster, Lynn, Mass.; E. G. Connette, Syracuse, N. Y.; D. B. Dyer, Augusta, Ga., and Robert McCulloch, Chicago, Ill.

President Roach—I would say to the gentlemen who have any idea of asking the Association to hold its next meeting in their city, that they can see Mr. Rigg, the Chairman of the Committee on Nominations, any time at their convenience. Mr. Rigg will appoint a time and place for the meeting of the Committee.

The Secretary—Mr. President, I will state that I have received invitations from the Mayor of Cincinnati, the President of the Cincinnati League, and from President Kilgour, of the Cincinnati Street Railway Company, asking us to hold the next convention in the city of Cincinnati, Ohio. I will turn

these invitations over to Mr. Rigg, Chairman of the Committee.

INVITATION FROM THE CINCINNATI STREET RAILWAY COMPANY.

(TELEGRAM.)

Kansas City, Mo.,
October 16, 1900.

American Street Railway Association—

The Cincinnati Street Railway Company will be pleased to have convention for 1901 held in Cincinnati, and herewith extends a hearty and cordial invitation to have the Association do so. Our representative unfortunately prevented from being in attendance at Convention.

JOHN KILGOUR,
President and General Manager Cincinnati Street Railway Co.

INVITATION FROM THE MAYOR OF CINCINNATI.

Mayor's Office,
Cincinnati, O.,
October 12, 1900.

To the Officers and Members of the American Street Railway Association, in Convention Assembled at Kansas City, Mo.—

Gentlemen: Being advised that the Cincinnati League, whose specific duty it is to extend the hospitality of Cincinnati to conventions and organized assemblages, has asked the pleasure of your presence in this city for your next Annual Convention, I have pleasure, upon the part of the municipal authorities, in confirming and seconding this invitation and assuring you that favorable action thereupon will afford me profound pleasure.

Very cordially yours,
JULIUS FLEISCHMANN,
Mayor of Cincinnati.

INVITATION FROM THE CINCINNATI LEAGUE.

Cincinnati, October 13, 1900.

To the Officers and Members of the American Street Railway Association in Convention Assembled at Kansas City, Mo.—

Gentlemen: The Cincinnati League, which is the accredited representative of the hotels, railroads, commercial societies, civic authorities, and also of the merchants, manufacturers and citizens of Cincinnati, tenders to you greeting and a cordial invitation to hold your next annual meeting in Cincinnati.

The advantageous location of this city, being a central converging point of over 175,000 miles of railway, operating the best built and equipped, most liberal line of street railways in the country; possessing in its Music Hall and other public halls facilities rarely adapted to the use of conventions and for the display of appliances, electrical and mechanical, which are adapted to your business; its hotels are amply sufficient to entertain your entire membership, at prices which are never advanced on account of large influx of visitors, which all combine to render Cincinnati an eminently proper place for your Convention.

The well known beauty of our suburbs, as well as the reputation of our citizens for cordial hospitality to strangers, afford additional reason why this invitation should have most favorable attention.

Furthermore, we are authorized to say that the management of the street railways in this city, feeling justly proud of what they have to exhibit in the way of practical and widely extended facilities for rapid transit, join in this invitation and in the pledge that no effort will be lacking to make the stay of your members in this city notable for profit as well as for pleasure.

Trusting that this tender of hospitality will be favorably acted upon, we have pleasure in enclosing also a confirmation thereof from the Mayor of the city, and have the honor to remain,

Very respectfully,

E. P. WILSON,
Secretary and Manager.

WM. B. MELISH,
President.

President Roach—The next order of business is the reading of papers. The first paper on the programme this morning is entitled, "Comparisons of the Various Systems of Electrical Distribution for Street Railways," by Mr. C. F. Bancroft, Electrical Engineer, Massachusetts Electric Companies. Boston, Mass. Mr. Bancroft is not in attendance at the meeting, and it will devolve upon the Secretary to read the paper.

COMPARISONS OF THE VARIOUS SYSTEMS OF ELECTRICAL DISTRIBUTION FOR STREET RAILWAYS.

The Secretary read the paper.

The American Street Railway Association—

Gentlemen: In preparing a paper on "Comparisons of the Various Systems of Electrical Distribution for Street Railways," the subject selected by the Executive Committee, I find that the conditions to be met in the numerous localities where the various systems are in

use are so widely different, and each system so generally satisfactory, under certain conditions, and so completely unsatisfactory for meeting other conditions, that comparisons are altogether impossible, except in a very general way.

There are six systems of electrical distribution for street railways at present in more or less general use.

First, what may be called the standard 500-volt continuous current system, where the current is generated at from 500 to 600 volts and delivered direct to the car motors, usually by means of a feed-wire and a trolley, third rail or underground conduit.

Second, what may be called the alternating direct current system, where the power is generated as alternating current, usually at high voltages of from 5,000 to 15,000 volts, and transmitted to sub-stations, where the voltage is usually reduced by means of static transformers, transformed into direct current by rotary converters, and delivered to the lines at about 500 volts continuous current.

Third, the "booster" system, where the current is generated usually at about 550 volts and where, by means of an auxiliary generator, usually series wound, called a "booster," additional voltage is generated and compensates for that lost on the line.

Fourth, the so-called three-wire system, where the current is generated at about 1,000 volts, usually by means of two 500-volt generators connected in series, and is delivered to two motors or two groups of motors in series.

Fifth, the alternating current system, where the power is generated as alternating current, usually at high voltage, and transformed down to about 500 volts at the trolley wires by means of static transformers which may be located on the poles supporting the feed-wire and trolleys, the cars being equipped with alternating current motors.

Sixth, the storage battery system, where the batteries are carried on the car and charged at the power house or at special points on the line. Storage batteries can also be used to advantage in connection with any of the above systems under certain conditions, and in fact combinations can be made of any or all of the above systems.

For any given conditions as to speed, traffic and length of line, some one of the above systems is likely to be much better fitted and more efficient than any of the others; therefore, it seems to me that a comparison of the various systems can best be made by considering the particular conditions most favorable to each. In the distribution of power for street railways the result to be aimed at is usually the maintenance, at variable loads, of an approximately constant pressure of 500 volts on the trolley wire at a minimum total cost for power.

The cost of generating electric power under the same conditions, as regards fuel, depends to a great extent on the amount of power generated and the capacity of the generating apparatus with refer-

ence to the average output required. Under ordinary operative conditions, with the same power factor, that is, the same ratio of output to capacity, the cost of power per kilowatt hour from stations of less than 500 kilowatt capacity increases very rapidly as the station decreases in size. With from 500 to 1,500 kilowatt capacity, the cost of power per kilowatt hour decreases slowly as the size of the station increases. From 1,500 to 2,500 kilowatt capacity the cost per kilowatt hour decreases very little as the output increases, and above 2,500 kilowatt station capacity the cost of power per kilowatt hour becomes nearly uniform. This is due to the fact that in small plants the labor item is disproportionately large, and the general efficiency less than in larger ones, while in plants of 1,500 kilowatt output and larger the cost of labor remains proportionately nearly the same as the plant increases in size. It follows from this that there is often very little or nothing to be gained from an economical standpoint by substituting one station of 5,000 kilowatt capacity for two of 2,500 kilowatt capacity each, provided the local conditions, as regards cost of coal, water, etc., are the same.

The system of distribution most suitable to a particular road depends to a great extent on the location of the power station or stations and the nature of the load. It is always expensive to transmit power, the expense being either in interest on copper investment or in fuel or both; and, therefore, other things being equal, the location of the power station or stations should be as near the load or center of distribution as possible. The location of the station is, however, usually governed to a considerable extent by local conditions as regards cost of fuel, water and real estate.

On a large system, requiring an average output of 12,000 kilowatts, even though the load be distributed within a five-mile radius of a practical station location, it will usually be found economical to generate this power at several smaller stations rather than at one large station, provided the conditions as regard cost of fuel, water, and real estate are about the same, as the cost of power station buildings and machinery per kilowatt of capacity and the cost of generating power per kilowatt hour, with a station of 5,000 kilowatt capacity, is about the same as at a station of 10,000 kilowatt capacity. The interest on the saving in cost of feed-wire by having several stations, each located near its load, would more than offset the slight saving in cost per kilowatt hour, due to the generation of power at one large station, and it also has the advantage that in case of fire or accident to one station the others can usually be so interconnected as to temporarily carry the entire load, and thereby avoid much of the stoppage of traffic which would occur if the road was supplied entirely from one station.

For an example of what was called the first or standard 500 volt

continuous current system of distribution, a city may be cited in which the street railway lines radiate west from the center of the city like the spokes of a half-wheel, with a radius of about five miles. Instead of having one large station at the hub of the wheel, the road is supplied with power from seven stations, distributed throughout the system, having an aggregate capacity of over 26,000 kilowatts.

The generating and distributing system in use in one of our most densely populated cities may be taken as an example of the way in which the system of distribution adopted is governed by conditions outside of those indicated for the most economical generation and distribution of power to the car motors. Although this system is compact and will probably require an average station output of over 30,000 kilowatts, which it would seem to the outside engineer could be more economically distributed and almost as economically generated at several stations, the street railway company is installing a high-tension alternating direct current system of distribution with a main station of 45,000 kilowatts ultimate capacity, and five rotary converter sub-stations of from 3,000 to 6,000 kilowatts capacity each. It is probable in this case that the location of the power station and the system of distribution was governed almost entirely by the great cost of real estate at points suitable for separate power stations.

It frequently happens that several miles distant from a street railway system much cheaper power is obtainable than at or near the center of the system. This may be due to an available water power, or to a difference in the cost of fuel, etc., at the two points. In cases of this kind the second, or what may be called the alternating direct current system, is usually the most applicable. To transmit power at 500 volts in any quantity from a distance of ten miles, or even less, is very expensive, owing to the large amount of copper required and the great loss. For instance, to deliver 500 amperes at ten miles distance will require about one hundred and fifty tons of copper, allowing a loss of about 30 per cent in the line. This same amount of power could be transmitted at 5,000 volts by an alternating direct current system with about five tons of copper and with a loss of less than 10 per cent. in the line.

The weight of copper required to transmit power a given distance, other things being equal, is inversely as the square of the voltage, that is to say, if it takes 100 pounds of copper to transmit a certain amount of power a given distance at 500 volts, it will only take 25 pounds of copper to transmit the same amount of power the same distance with the same loss at 1,000 volts. It is owing to this fact that the alternating direct current system is so applicable where the power has to be transmitted for any considerable distance, as it allows of the use of very high voltages on the line, 10,000 volts or more being in general use, which by means of transformers and rotary converters

can be reduced to 500 volts direct current for the trolley wire at points where the power is required. For an example of this system of distribution, a street railway system may be cited which derives its power from a water fall. Here the power is generated at a pressure of 2,200 volts and is stepped up to 11,000 volts for the line. About 6,000 H. P. is transmitted at this voltage for a distance of about twenty-one miles. The voltage is then reduced to 500 volts, direct current, by means of static transformers and rotary converters at five sub-stations, located at or near the points where the power is required.

The third system mentioned, the "booster" system, is chiefly applicable on lines where there is a light average load, but where for short periods an extra heavy load has to be taken care of. It would seldom be economical to supply an entire road with power by means of a booster system, as the greater part of the power generated by the booster represents wasted energy, which is usually generated in an extravagant way, as the power required to drive the booster varies as the square of the current in the feeder, that is to say, if it requires 50 H. P. to drive the booster with a load of 100 amperes, it will require 200 H. P. to drive it if the load is increased to 200 amperes. Line losses which necessitate the continuous waste of more energy than could be compensated for by an ordinary compound wound railway generator are seldom economical, even on a portion of a system, but there are many cases where there is sufficient copper installed to take care of the average load economically, but where for a short time each day, or for a few weeks in the year, owing to local conditions, the traffic is very unusually heavy.

In cases like the above, where the heavy traffic is of short duration, a well designed booster system may save a large investment in copper at a total cost of much less than would be required to pay the interest on the copper investment. For an example of this method of distribution I might cite a street railway company which supplies power to its own lines by means of a standard 500-volt direct current system, and which also supplies power to a smaller road about thirteen miles distant by means of a three-phase alternating current system, using 5,500 volts on the line. Here the booster system is used in connection with the high tension system. When it became necessary to repair the high tension line, it was found expensive and inconvenient to do the work between the hours of 12:00 midnight and 4:00 A. M., the only time when the power was off, and as it was not considered safe to work on the line when it was in operation, a booster system was arranged to supply power to the distant road for short periods at times of light load. A 200 kilowatt booster was installed at the generating station and was designed to raise the voltage one volt per ampere of current. Switches were installed at the sub-stations so that the high tension line could be connected directly with the 500 volt feeders, some eight

miles from the generating station, and the booster was arranged so that it could be readily connected to the high tension feeders.

When it was necessary to replace broken insulators or make other repairs on the line the attendants were notified at the generating station and at the sub-stations, and at a pre-arranged signal, made by varying the voltage on the line, the alternators were thrown out and the booster thrown on in such a way that the power was only off from the trolley wire for a fraction of a minute. It was thus found quite practicable to make repairs on the line while the booster was in operation, and the system proved very satisfactory for supplying power at times of light load, while repairs were being made; the load on the booster frequently running as high as 500 amperes, at which time the voltage generated by the booster was about 500, which in addition to the 575 volts of the direct current system gave 1,075 volts at the generating end of the line; the voltage at the sub-station averaging about 450. While it would have been very expensive to run this booster for any great length of time, for the short time it was used the total cost was much less than the interest on the copper investment required to build a duplicate line.

The fourth system mentioned, or three-wire system, is most applicable to double track lines, where one trolley is made positive and the other negative, there being about 1,000 volts potential difference between the two, the current flowing from the positive trolley wire through the car motors to the rail and from the rail through the car motors and the other track to the negative trolley. The track is usually cross-bonded and also connected to the conductor connecting the two generators which are operated in series in the station. This connection with the track forms the third wire and tends to equalize the voltage should there be more cars on one side of the system than on the other. This method of distribution is usually capable of saving from 20 to 40 per cent in copper, according to the character of the track return. If well balanced, it also greatly reduces the electrolytic action on buried conductors, such as water pipes, etc., and is most applicable where there are excessive track losses with fair opportunities for a balanced load.

There are few roads in this country using the three-wire system of distribution, although it is used almost universally by lighting companies. This is probably due to the complications introduced in railway systems by the high voltage, usually about 1,000 volts, between the trolley wire and feeders on different sides of the system and the difficulty of balancing the load. The saving in copper, while not as great as in the three-wire lighting system, is still enough to warrant the extra complication, and under favorable conditions may prove very valuable.

I am only familiar with one example of this system of distribu-

tion. In this case there is very heavy traffic over a double track line to a park, about six miles from the power station. It was found impossible to handle the increased traffic on the ordinary 500 volt system with the existing feedwire. By reinsulating the line and operating it on the three-wire system, the efficiency of the distributing system was very much improved and they were enabled to easily handle the increased traffic with the existing feedwire.

The fifth system mentioned, or the alternating current system, is practically untried in this country. It seems peculiarly adapted to lines having long runs at uniform speed with few stops, such as lines connecting cities, rather than for ordinary street railway service. The alternating current motors at present in general use are of the polyphase type, and require at least three working conductors, which is a serious objection in many cases for railway work, as it necessitates the use of two trolley wires in addition to the track as conductors. The disadvantages of this system appear to be the necessity for at least two trolley wires and the probable difficulty in building alternating current motors suitable for railway work which will have a good power factor.

The main advantage of the alternating current system is the possibility of feeding lines with stationary transformers which need no supervision, but which can be considered simply as a part of the feeder, thereby multiplying many times the length of line which can economically be supplied with power from one station. The alternating current motor also has the advantage of running at fairly constant speed independent of the load. It will not race going down hill if the power is left on, but will return power to the line, nor will it slow down much in going up hill. There are four or five railway companies using this system, and judging from the reports that appear from time to time in the railway journals it is giving very satisfactory results.

The sixth system referred to, or storage battery system, is decidedly more expensive than the usual methods of electrical distribution, owing to the great first cost and the short life of the batteries. Lead is the only cheap metal capable of resisting the attacks of sulphuric acid, and modern batteries consist largely of lead, which is very undesirable from a mechanical point of view and is very heavy, so that unless the present type of storage battery is substantially improved, this system is only likely to be used where other systems are not practicable owing to peculiar local conditions or restrictions. The storage battery, however, has a large field in connection with the other systems of electrical distribution for street railways, and under favorable conditions may considerably increase the station capacity and reduce the fuel consumption; and when used

on the line may greatly improve the regulation and increase the copper efficiency.

From this brief outline of the various systems it will be seen that each has its peculiar advantages and that no one is suitable under all conditions. It will generally be found that where the traffic is heavy and the distance short, the standard 500 volt system is most applicable. For suburban work, where the distances are greater and the traffic less congested, or where it is necessary to transmit the power for some distance, the polyphase alternating direct current system will usually be found more economical. In special cases, where for short periods of time an unusually large amount of power is required, the "booster" system will often prove very valuable, while for high-speed, long distance, interurban work the three-phase alternating current system may be attractive. The cars on this system, however, would have the great disadvantage of not being able to run over the ordinary direct current street railway lines.

There can be no general rule given that will determine the most advantageous system of distribution to use under the varying conditions to be met in street railway work. Each case must be considered as a separate problem and that method selected which will best meet the peculiar conditions involved.

Respectfully submitted,

C. F. BANCROFT.

President Roach—Gentlemen, we have gathered here for the purpose of disseminating information. You have heard the paper just read. We would be pleased to hear from some of the gentlemen who are present in reference to the subject matter of this paper. I will call upon Mr. E. C. Foster, of Lynn, Mass., to open the discussion on this paper.

REMARKS OF MR. E. C. FOSTER ON "COMPARISONS OF
THE VARIOUS SYSTEMS OF ELECTRICAL DIS-
TRIBUTION FOR STREET RAILWAYS."

Mr. Foster—Mr. President and Gentlemen: I thank you for calling upon me, but as I am not an expert electrician, it seems to me that I am hardly competent to discuss the merits of the paper which has been read. I think that Mr. Bancroft has treated the subject in a very broad way. He is a very competent man and is employed by the same companies which employ me. We consider him one of the ablest electrical en-

gineers in the Eastern country. I do not care to undertake to discuss this subject. There are many others here far more competent to do it than I, and I should be pleased to hear from Colonel Heft. I thank you for calling upon me, Mr. President.

President Roach—Is Colonel Heft in the room? If so, we would be pleased to hear from him. As Mr. Heft is not present, I will call upon Mr. E. G. Connette, of Syracuse, N. Y., to give us his views upon the subject.

Mr. Connette—I thank you, Mr. President, but I think, like Mr. Foster, that the paper is of such a technical nature, and the ground has been so fully covered, there is nothing that can be said which would be interesting in addition to what the author has already stated.

President Roach—I can fully appreciate what the gentlemen have said, after listening to the paper. It certainly seems to cover the ground quite fully. We would like to hear from Colonel Dyer, of Augusta, Ga.

Mr. Dyer—Gentlemen of the Convention: I am not at all prepared to discuss a technical paper of this character. I think that the subject has been treated most exhaustively, and it is a valuable paper. This Association certainly owes a debt of thanks to the gentleman who wrote it. I am wholly unable, however, to go into the details of the paper and discuss the advantages of the different systems which have been referred to.

Mr. Connette—Mr. President, I would suggest, if you will permit me, that we hear from Mr. Charles W. Wason, of Cleveland.

REMARKS OF MR. CHARLES W. WASON ON "COMPARISONS OF THE VARIOUS SYSTEMS OF ELECTRIC-AL DISTRIBUTION FOR STREET RAILWAYS."

Mr. Wason—Mr. President and Gentlemen of the Convention: It seems to me that the author of this paper has treated the subject in such a manner as to make a discussion quite out of the question. The fact is the condition of each road,

as it presents itself, determines in a great measure the character of the electrical equipment. If we had a road under consideration which we desired to equip, then a discussion would be pertinent as to which one of the several systems presented would, in the minds of the gentlemen present, be competent to bring out the best results.

President Roach—Gentlemen, you have heard the paper? What is your pleasure as to its disposition?

Mr. Connette, Syracuse—I move that the paper be received and the thanks of the convention tendered to the author. (Carried.)

President Roach—The next regular order of business is the reading of the paper on "Painting, Repainting and Maintenance of Street Car Bodies," by Mr. F. T. C. Brydges, Superintendent of Car Shops, Chicago Union Traction Co., Chicago, Ill.

PAINTING, REPAINTING AND MAINTENANCE OF STREET CAR BODIES.

The Secretary read the paper:

The American Street Railway Association—

Gentlemen: In giving my views as to the proper manner in which to paint, repaint and maintain street car bodies, I thoroughly realize that it is a subject of the greatest interest to street railway men; and as it is a part of my daily duty to supervise this class of work, the subject is of the greatest interest to me, and I will endeavor to give my views on the three topics separately.

PAINTING.

Our object in painting a street car is two-fold: maintenance and durability of structure, and appearance. It is needless for me to go into the question of the increased life and durability of a street car, when properly painted, repainted or revarnished, as often as necessity may require to keep it up and maintain it in good condition, as it is an admitted fact that painting, repainting or revarnishing, as necessity may require, adds to the life and durability of street cars.

Our methods of painting new cars are simple and, we think, very efficient. We apply our first, or priming coat, on all wood work to be painted, then putty all nail holes and other imperfections, and

then sandpaper the priming coat. In place of applying four or five coats of rough stuff to produce a surface, we apply one coat of glaze, or scrape-in coat, as I am of the opinion that the least number of coats of paint applied to produce a surface for painting the better. There is not so much danger then of the finished surface cracking and checking, as when there are four or five coats of Japan or quick drying material used to produce a surface with rough-stuff, which, as a rule, is dry, brittle and non-elastic, and owing to the thickness of the four or five coats, is almost sure to check more or less within a short time after the work is finished. After the glaze, or scrape-in coat, is thoroughly dry, the same is sandpapered down close. The iron sill plates, in the case of open cars, are scraped in with the same quality of material and then sandpapered in the same manner as the wood work surface, the iron plates and all other iron work being thoroughly painted with best quality of Prince's mineral, mixed with raw oil, turpentine and Japan, as the first coat, to prevent rusting of iron. After the glaze coat has been thoroughly sandpapered to a smooth surface, apply the first coat of body color, consisting of ten pounds of bleached white lead, five pounds of Japan body color, one pint of raw oil and then apply the second coat of pure Japan body color and one coat of color varnish, sandpapering slightly with one-half or "O" sandpaper each coat of color before applying the next coat of color. Dashes and all iron work are painted with Prince's mineral, as above described, as the first coat, to prevent rust and then brought up in the same manner as the wood work, except the glaze or scrape-in coat, which is omitted on all iron work. This exception, however, does not apply to sill plates or any part that is to be finished in connection with the body or wood work. After a coat of varnish color has been applied, which is the last coat of color, the ornamentation and lettering is then applied. Our style of ornamentation and lettering, we believe, is simple and yet very neat in design, consisting of a fine line, a broad line and a small corner ornament worked into the fine line, thus making the ornamentation not expensive, but very neat in appearance. We are of the opinion that expensive and elaborate ornamentations on street cars are needless, a waste of money, and do not appear as well on the cars as a less expensive design. The great objection to expensive designs for ornamentation is not only their original cost, but it is more difficult to touch up when damaged in service by some careless teamster who has punched a hole in the panel with the pole of his wagon, or scratched the entire length of the body and thereby damaged the side of the car. This class of car damage is a very frequent occurrence in the large crowded cities and much increased by careless teamsters. After the lettering and ornamentation is complete, we finish the entire surface with two or three coats of varnish

of standard quality, the first coat being rubbing varnish, if two coat work, also the second coat being rubbing varnish if three coat work, the last coat being finishing varnish. We do no rubbing with pumice stone on the rubbing varnish, as we consider it unnecessary for street car surface to waste time and money in rubbing down finishing varnish. We object to rubbing with pumice stone as, in our opinion, it reduces a certain amount of the life of the varnish.

INTERIOR FINISH ON OPEN OR CLOSED CARS.

Apply one coat of good wood filler for hardwood work. Stain all soft wood work for molding or otherwise to such tint as desired, clean up with fine sandpaper and apply a very thin coat of varnish, allowing it to stand about twenty-four hours. Then sandpaper and apply a second coat of coach rubbing varnish, then sandpaper lightly with "O" sandpaper and apply the third coat of varnish. We use no shellac on our soft or hardwood finish. We object to shellac being used in connection with car finish in any particular. We prefer to have the first coat of varnish applied on the wood next to the hardwood filler or applied on the soft wood. Interior of panels are finished with two or three coats of good standard paint applied on the canvas and other unfinished woodwork. We grain and finish with three coats of varnish the exterior of sash and doors, as graining is far more durable than finishing in natural wood with wood filler and varnish only.

ROOFS.—All roofs are painted with three coats of standard paint, or a good brand of white lead, tinted as desired.

FLOORS.—All floors are painted with two coats of standard floor paint or Prince's mineral paint.

TRUCKS.—All trucks are painted with one coat of Prince's mineral paint and one coat of standard truck color, striped to some extent if desired on trail cars.

TIME REQUIRED FOR PAINTING CARS.—Cars, open or closed, can be painted and finished ready for service with the above system in eight days. But I do not wish to be understood to claim, or recommend, that eight days is sufficient time to do good car painting, or to adopt as a general practice, as more time is much better. I simply mention the fact that it is possible to paint cars in eight days with this system.

REPAINTING.

Our system for repainting cars, so far as the painted surface is concerned, is about the same as above described. When their condition requires the old paint to be removed to the wood, we do

so by burning off all the old paint to the wood, then scrape the surface smooth to receive the priming coat and then proceed in the same manner as above described with glaze coat, color, ornamentation, lettering and then finish with the same number of coats of varnish, and applied in the same manner, as in the case of new work. If, however, the old paint is not cracked too much, and the surface has sufficient life to receive new paint, we clean up the entire car by thoroughly washing, then sandpaper the surface smooth and apply two coats of body color and a coat of varnish color, on which we apply our lettering and ornamentation. We then finish with one coat of rubbing and one coat of finishing varnish. The interior we revarnish with one coat of finishing varnish, except the seats and other hardwood surfaces of open cars, which we revarnish with one coat of varnish, one-half rubbing and one-half finishing. Two coats may be applied in the same manner if the condition of the car requires it.

MAINTENANCE OF STREET CAR BODIES.

Under this head I am of the opinion that the best manner to maintain the life of street car bodies is:

First.—At the car station from which the cars are run have them properly and thoroughly washed every day with cold water and a good quality of pure non-alkali soap prepared ready for use in liquid form at the paint shop of the company, or some other soap provided it is of equal quality, avoiding the use of warm water, as there is a great possibility of the car washer using the water too warm and thereby damaging the life and appearance of the varnish. After the car has been thoroughly washed, all the varnished surfaces should be thoroughly rubbed dry to prevent water remaining on the varnished surfaces and thereby causing damage thereto and shortening the life of the varnish.

Second.—I am of the opinion that all street cars, closed or open, should pass through the car shops once each year for general repairs, thoroughly cleaned, touched up and revarnished with one coat of varnish, interior and exterior, two coats of varnish if their condition requires it, and the roof painted with two good coats of white lead or standard roof paint. Floors, platforms and all canvas and unfinished interior wood work should be painted with two coats of paint, and the trucks and all iron work repainted with at least one coat of good standard paint. Respectfully submitted,

F. T. C. BRYDGES.

President Roach—Gentlemen, you have heard the reading of the paper. What is your pleasure? We would be very

much pleased to hear some of the gentlemen from different parts of the country discuss this subject. It is quite important.

Mr. Harrington, Camden—I would inquire if Mr. Brydges is here. If so, whether he can give us any of the costs of the work he has referred to?

President Roach—Mr. Brydges is not here. He is not in very good health and was not able to come to the meeting.

REMARKS OF MR. W. E. HARRINGTON ON "PAINTING, RE-
PAINTING AND MAINTENANCE OF STREET
CAR BODIES."

Mr. Harrington—I have prepared some statements of the cost of the various kinds of painting we have done. I made some statements last year at the meeting which seem to be rather low in price. I have prepared these figures from work actually done and took five different operations, taken them from our detail sheets. For instance, in first-class operation, which is for an eighteen-foot car body, including the entire repainting of the car, the roof and the trucks, under the contract price, piece-work system, the cost was \$28.00 for labor and \$19.79 for material, the total cost being \$47.79.

I have here, which I will hand to the Secretary, a detailed statement showing the various operations and the material entering into them.

On a second class operation, same work, on a sixteen-foot car body, the total cost was practically the same. On a third class operation, a \$14.00 contract, cutting in the paint work, varnishing, etc., the total cost was \$24.21, the material being \$10.21. The fourth class operation was outside painting of vestibules and cutting in dashers, touching up main body, blacking off iron work, one coat of finishing varnish, one coat of paint on roof, dashers, floors and platforms and one inside coat of finishing varnish. The contract price for this work was \$8.50 and the materials \$7.71, making a total of \$16.21. The simplest operation is the fifth class operation, outside touching up dashers and main body of car, outside blacking off

of iron work, one coat of outside finishing varnish, one coat of roof paint, and one coat of paint on inside of dashers, floors and platform. The contract price for this work is \$4.00, and the material \$5.13, making a total of \$9.13, as an average. This work is done on the piece-work system. Under the usual system of hiring labor, we usually found our labor cost fifty to one hundred per cent. more than under the piece-work system. I have taken these figures from our books, and have had some talk on the subject with other street railway managers, and they think that the figures are very satisfactory.

The table referred to by Mr. Harrington follows:

TABLE OF FIGURES AS TO COST OF PAINTING CARS ON
THE CAMDEN AND SUBURBAN RAILWAY COM-
PANY, CAMDEN, N. J., SUBMITTED BY
MR. W. E. HARRINGTON.

1st Class Operation.....\$28.00 Contract.
18 ft. Body......10 Bonus.

WORK.

1. Outside burning off old paint.
2. " sandpapering.
3. " two coats of priming.
4. " four (4) coats of surfacer or rough stuff.
5. " rub to a smooth surface.
6. " 1st coat of color.
7. " 2nd " " "
8. " color and varnish.
9. " striping and lettering.
10. " one coat rubbing varnish.
11. " " " finishing varnish.
12. " blacking off iron work.
13. Roof one coat of paint.
14. Inside dashers—one coat paint.
15. Floors and platforms, one coat paint.
16. Inside, one coat rubbing varnish.
17. " " " finishing "

MATERIAL.

6	sheets No. 1½ sand paper.....@	4-10c	\$.03
6	" No. 2 " "	1-2c	.03
25	lbs. priming color....."	6 1-2c	1.63

1/2 gal. coralline or rough stuff.....	@ 2.50	1.25
16 1/2 lbs. cream color.....	" 6c	.99
6 1/2 " special red.....	" 46c	2.99
4 books gold leaf.....	" 35c	1.40
1 1/2 books aluminum leaf.....	" 12c	.18
2 1/2 spools Coe's ribbon gold.....	" 87c	2.18
1/4 lb. golden ochre.....	" 25c	.07
1/2 " sizing	" 48c	.24
1/4 " white paint	" 8c	.02
1/4 " drop black	" 32c	.08
3/4 " venetian red	" 25c	.19
2 1/2 qts. rubbing varnish (gallon).....	" 3.50	2.20
2 " inside finishing varnish (gallon).....	" 3.50	1.76
1 " black iron varnish (gallon).....	" 75c	.19
2 gals. red rubber paint (gallon).....	" 1.17	2.34
2 qts. outside finishing varnish (gallon).....	" 4.04	2.02

Material\$19.79

Labor, \$27.90; bonus, 10c..... 28.00

\$47.79

2nd class operation.....\$22.50 Contract.

16 ft. Body 2.41 Bonus

WORK.

1. Burning off.
2. Outside sand papering.
3. " one coat of priming.
4. " three coats of surfacer or rough stuff.
5. " rub to a smooth surface.
6. " 1st coat of color.
7. " 2nd coat of color.
8. " color and varnish.
9. " striping and lettering.
10. " one coat rubbing varnish.
11. " " finishing varnish.
12. " blacking off iron work.
13. Roof, one coat paint.
14. Inside dashers, one coat paint.
15. Floors and platforms, one coat paint.
16. Inside, one coat finishing varnish.

MATERIAL.

4 sheets No. 1 1/2 sand paper.....	@	4-10c	\$.02
4 " No. 2 " "	"	1-2c	.02

14	lbs. priming.....@	6 I-2c	.91
3	pints coralline or rough stuff (gal.).....	2.50	.94
16½	lbs. cream color.....	6c	.99
6½	" special red.....	46c	2.99
4	books gold leaf.....	35c	1.40
1½	books aluminum leaf.....	12c	.18
2½	spools Coe's ribbon gold.....	87c	2.18
¼	lb. golden ochre.....	25c	.07
½	" sizing	48c	.24
¼	" white paint.....	8c	.02
¼	" drop black.....	32c	.08
¾	" venetian red.....	25c	.19
1¾	qts. rubbing varnish (gal.).....	3.50	1.54
2	" inside finishing varnish (gal.).....	3.50	1.75
1	" black iron varnish (gal.).....	.75	.19
2	gals. red rubber paint (gal.).....	1.17	2.34
2	qts. outside finishing varnish (gal.).....	4.04	2.02

 \$18.07

Labor, \$17.08; bonus, \$2.41..... 19.49

 \$37.56

 3rd class operation.....\$14.00 Contract.
 1.62 Bonus

WORK.

1. Outside, painting vestibule and dashers.
2. " cutting in all painted work.
3. " relettering and striping dashers.
4. " blacking off iron work.
5. " one coat rubbing varnish.
6. " " finishing varnish.
7. Roof, " " paint.
8. Inside dashers, one coat paint.
9. Floor and platforms, one coat paint.
10. Inside, one coat finishing varnish.

MATERIAL.

4	lbs. special red.....@	46c	\$1.84
8	" cream color.....	6c	.48
2½	books gold leaf.....	35c	.88
½	spool Coe's ribbon gold.....	87c	.44
¼	lb. golden ochre.....	25c	.07
¼	" sizing	48c	.12
¼	" white paint.....	8c	.02

1/4 lb. drop black.....	@ 32c	.08
3/4 " venetian red.....	" 25c	.19
1 qt. black iron varnish.....	" 19c	.19
1 3/4 qts. rubbing varnish (gal.).....	" 3.50	1.54
2 gals. red rubber paint.....	" 1.17	2.34
2 qts. outside finishing varnish (gal.).....	" 4.04	2.02

\$10.21

Labor, \$12.38; bonus, \$1.62..... 14.00

\$24.21

4th class operation.....\$8.50 Contract.
..... 1.42 Bonus.

WORK.

1. Outside painting vestibules and cutting in dashers.
2. " touching up main body.
3. " blacking off iron work.
4. " one coat finishing varnish.
5. Roof, " " paint.
6. Inside dashers, one coat paint.
7. Floors and platforms, one coat paint.
8. Inside, one coat finishing varnish.

MATERIAL.

2 1/2 lbs. special red.....	@ 46c	\$1.15
2 " cream color.....	" 6c	.12
1/2 lb. venetian red.....	" 25c	.13
1 qt. black iron varnish (gal.).....	" 75c	.19
2 gals. red rubber paint (gal.).....	" 1.17	2.34
2 qts. outside finishing varnish (gal.).....	" 4.04	2.02
2 qts. inside finishing varnish.....	" 3.50	1.76

\$ 7.71

Labor 8.50

\$16.21

5th class operation.....\$4.00 Contract.
..... .66 Bonus.

WORK.

1. Outside touching up dashers and main body of car.
2. " blacking off iron work.
3. " one coat finishing varnish.
4. Roof, " " paint.

5. Inside dashers, one coat paint.
6. Floors and platform, one coat paint.

MATERIAL.

1½ lbs. white paint.....@	8c	\$.12
1 " special red....."	46c	.46
1 qt. black iron varnish....."	75c	.19
2 gals. red rubber paint (gal.)....."	1.17	2.34
2 qts. outside finishing varnish....."	4.04	2.02
		<hr/>
		\$5.13
Labor		4.00
		<hr/>
		\$9.13

President Roach—Are there any other gentlemen who would care to say anything upon this subject:

Mr. Foster—I would ask through you, Mr. President, the price paid by Mr. Harrington for the labor in doing that contract work.

Mr. Harrington—Twenty-five cents an hour for the painter. The assistant painter receives fifteen cents an hour.

President Roach—There seems to be no further discussion on this paper. What is your pleasure, gentlemen, in regard to it?

Mr. Rigg, Reading—I move that the paper be received, and the thanks of the Association be extended to Mr. Brydges. (Carried.)

ANNOUNCEMENT OF ENTERTAINMENT.

The Secretary—There will be a trip to the Armour Packing House at two o'clock this afternoon, and all are invited to visit the plant. A theater party will attend the performance of "The Runaway Girl" at the Coates Theater this evening, and tickets will be supplied to all the delegates, for themselves and ladies.

On motion, adjourned until 11:00 o'clock Thursday morning.

THURSDAY'S SESSION.

President Roach called the meeting to order at 11:10 A. M.

President Roach—Gentlemen, we will now proceed with the regular order of business this morning. The only paper on the programme for this session is on “Double Truck Cars—How to Construct and Equip Them to Obtain Maximum Efficiency with Minimum Cost of Maintenance,” by Mr. N. H. Heft, President Meriden Street Railway Company, Meriden, Conn.

DOUBLE TRUCK CARS.—HOW TO CONSTRUCT AND EQUIP
THEM TO OBTAIN MAXIMUM EFFICIENCY WITH
MINIMUM COST OF MAINTENANCE.

Mr. Heft read the paper:

The American Street Railway Association—

Gentlemen: In order to prepare a paper which would be of any value to the members of this Association, it was necessary to learn the conditions governing the operation of double truck cars on different systems. The conditions under which cars are operated vary to such an extent that it is impossible to construct and equip a car that can be operated with equal economy on each system.

In order to keep within the time allowed by the Executive Committee, and the more readily to convey to the members the writer's opinion as to the most desirable double truck car, the subject matter will be taken up under the following divisions:

- 1st. Trucks;
- 2d. Electric Motors;
- 3d. Double-truck Car Body and Equipment.

TRUCKS.

The double-truck for use on street railways has not received the attention it merits. These trucks have been constructed along the lines of the single truck, and to meet the varied views of railway managements.

One has only to observe the different styles of trucks now in use to find how at variance have been their views.

The fifty-five years' experience of the steam railroad in the development of the double-truck now used by them, should be a warrant to the street railway managements in adopting only trucks that conform

to the lines used by these roads; the diameter of wheels, with the tread and depth of flange changed only where conditions prevent using the Master Car Builders' standard.

In Figs. 1, 2, 3, is shown a double-truck design along steam railway lines to meet the varied condition of street railway service. In the design of this truck it has been the aim of the designer to include all known good features of the present street railway truck and to add improvements of value. This truck is constructed with a minimum number of parts consistent with safety, strength, accessibility, lightness and cost of maintenance.

In giving a brief description of the truck shown, it will not be necessary to mention the wheels further than to say that they are cast chilled, thirty-three inches in diameter with a 3-inch wheel tread, flange one inch, formed to fit the modern rail shown in Fig. No. 1, weight three hundred and eighty pounds.

The axles are of forged steel, high in carbon, with a 2-inch hole bored through the entire length. The key seat at gear wheel fit is cut above the line of motor bearings and journals, as shown in Fig. No. 1, in order not to weaken the axle.

The oil boxes are constructed so that the journal brasses may be readily removed with dust-guard placed in position from the under side of box. An extra guard is placed from the same side and where it will retain the oil at the highest point.

The journal brasses and boxes are finished in such a manner as to obtain the full journal bearing under all conditions.

The side frames are made from two $\frac{3}{8}$ -inch steel plates, thus allowing the main equalizer to be supported between the two frames on long spiral springs. With this arrangement the bar can be removed for repairs without in any way taking the truck apart. This form of frame allows the greatest accessibility to all parts, and the use of the extended equalizer bars, shown on Fig. No. 1, gives extended spring movement, with a perfect side movement on curves and at low places in the track, minimizing the blow to the car body, rail joints and special work and reducing the cost of maintenance of track and equipment. The side frame is so strongly constructed at points where the transom joins the frame that it is not necessary to continue the frame around the end and connect with the other side of the frame to keep the truck in alignment. This also allows the placing of the truck near the end of the car body without coming in contact with the steps.

The brake is placed on the inside of the wheel, without using a brake beam. This position insures the most positive action, with either hand or power and independent braking on each wheel. The wheel base, 5 ft. 6 in., allows the motors to be suspended between axles and transoms.

MOTORS.

The writer, having had experience with heavy and light motors, mounted with two motors on one truck, the other truck being an idle or trail truck, as well as with one motor on each truck, has found that, while greater efficiency is shown with the latter method, the two motors mounted on one truck, shows a saving in labor, first cost of the trail truck, with less cost for maintenance.

Maximum efficiency, with minimum cost of maintenance, with both heavy and light motors, has been obtained by mounting two motors on each truck, making a four-motor equipment. With this form of equipment, higher speed and quicker acceleration are obtained with less power consumption, both in the average and total for the whole trip.

After an experience extending from the time that the first railway motor was constructed, the writer knows of no mechanical apparatus in which the development has been so rapid and the point of perfection so nearly attained. Yet the future promises even greater development, both in the direct and alternating current motors. With the great corps of engineers employed by our large manufacturing concerns working with the men who are operating these motors and constantly suggesting and demanding improvements, the ideal commercial car equipment will be developed.

The writer desires to call the attention of electrical and mechanical engineers to improving ventilation, increased copper, insulation, bearings, hollow armature shaft, decreased armature speed and gearless motors.

The controllers have not, as far as space and weight are concerned, kept pace with the motors. This part of the apparatus should receive the attention of the best talent of our manufacturing companies. The four-motor controllers, in their present form, are large, cumbersome affairs, placed in that portion of the car body where it is inconvenient and expensive to support. A more satisfactory controller can be produced by using a small pilot controller placed on the platform, with some developed form of main controller underneath the car body.

DOUBLE-TRUCK CARS AND EQUIPMENT.

From information furnished by the operating department and personal observation, the writer is led to believe the following dimensions the most desirable:

Length over all, 40 to 50 feet.

Width over all, 7 ft. 6 in. to 8 ft. 8 in.

With the increasing demand from the traveling public for the extension of present systems to suburban districts with a more fre-

quent service and increased speed, also the construction of long inter-urban lines, the present managements, to meet this demand, are turning to the double-truck car constructed along the lines of the steam railroad coach.

In Figs. No. 1 to 5, will be found a double-truck car, which the writer believes will become justly popular. This car combines the largest number of good features and is so constructed as to admit of placing the electrical equipment where it is accessible and less liable to come in contact with the truck or brake equipment.

The car body can be carried at the lowest point and trucks placed near the end of body. This car gives the maximum efficiency, durability, speed, safety and seating capacity, attractiveness and ease and comfort to passengers, coupled with the minimum cost of construction and maintenance, and less dead weight per passenger, based on seating capacity.

The total weight is made up as follows:

Trucks, 3,970 lbs. each;

Four motors, 2,385 lbs. each;

Car body and equipment, 12,300 lbs.

Making a total weight of 29,780 lbs. This amount, divided by sixty-three passengers, gives a dead weight of four hundred and seventy-three pounds per passenger. The cars of to-day show a dead weight, based on the seating capacity, of fully seven hundred and fifty to eleven hundred pounds.

While the writer does not claim that the truck and car body described are perfect, yet he believes they are along lines that will become attractive to managers when taking up the cost of operation. Decreased cost of operation can only be obtained by purchasing equipments that are designed to perform a specific duty where all weights and speeds are known.

Respectfully submitted,

N. H. HEFT.

President Roach—Gentlemen, we invite the members to come forward and inspect the plans prepared by Colonel Heft at considerable trouble and expense, showing the details of the construction of the car he has spoken of. (A number of the members then inspected the plans of the car.)

President Roach—I would state, gentlemen, for your information, that all of the cuts as shown here will appear in the minutes of the meeting to be printed hereafter and distributed among the street railway men of the United States and Canada. I desire, personally, to thank Colonel Heft for

the able paper that he has read here, and we will be much pleased to hear it discussed by the members of the Association. To start this discussion, I take pleasure in calling upon Mr. E. C. Foster, of Lynn, Mass.

REMARKS OF MR. E. C. FOSTER ON "DOUBLE-TRUCK CARS."

Mr. Foster—Mr. President and Gentlemen: I have listened with a great deal of interest to the paper read by Colonel Heft, and have also given a casual glance at the drawings submitted. I think that Colonel Heft is on the right line in the way of making improvements. We all know that it is desirable to have cars constructed as light in weight as possible, and yet to be sufficiently strong to meet all the requirements and conditions.

I am very glad, Mr. President, that Colonel Heft has taken up this subject. We all know that the varying conditions under which we operate in the various States and municipalities require a different kind of equipment. There are places, of course, on the interurban lines where an equipment designed similar to that submitted here could, without doubt, be operated very successfully. The Lynn and Boston Railroad Company is operating lines running into Boston. We operate one line over a distance of sixteen miles, on which are 12-bench double-truck open cars, equipped with four motors. The box-car equipment is a twenty-five foot box car, double truck, with four motors. We have been operating over this line about fifteen months. We are running at a maximum speed of thirty miles an hour, and we have found by our experience that the operating of four motors is more economical than the operation of two motors over the same line under the same cars and under the same conditions. To be sure, there is an increased consumption of power. We are all willing, I believe, to concede that, and I think Colonel Heft will agree with me, although he shakes his head to the contrary. From tests made, we are sure of it. The operation of four motors, of course, depends upon the speed you wish to at-

tain, and that it is desirable to attain. In operating upon a line where your speed is not more than twelve to fifteen miles per hour, I question whether it would be wise to adopt the practice of using four motors. We are also operating on many lines sixteen, eighteen, and twenty-foot cars. With those cars, we operate, as is customary, the usual two motors. We have various types of motors, but we have learned by experience that the double truck car, with two motors, or four motors, is more desirable and profitable to operate; and we are now rebuilding some of our smaller cars and converting them into twenty-five-foot cars. We are doing that successfully. We are also building a large number of new twenty-five-foot double truck cars. I do not know, gentlemen, that I care to say more on this subject.

REMARKS OF MR. EUGENE CHAMBERLIN ON "DOUBLE-TRUCK CARS."

Mr. Chamberlin, Brooklyn—Mr. President and Gentlemen: You will appreciate that the average mechanic in this country has his "hobbies" as well as the professional man. Without referring to any part of the electrical equipment which Colonel Heft has designed for his peculiar class of cars, there are innovations from the present practice in the construction of a car body, which may well attract attention. With most of us, innovations of this character are subject to adverse criticism. I know of no one who would be less subjected to such criticism than the author of this paper, who has had a vast amount of experience in the construction and maintenance of equipment, and it seems that it is right and proper he should make an innovation of this character. I speak more particularly of the construction of a car without longitudinal truss rods. I think that Colonel Heft has designed a car of something over forty-two feet in length, and gains his body support by a number of cross transoms constructed in the form of the ordinary iron body bolster, but less in section, welded at the ends and filled in with wood, and supported through the center with longitudinal "I" beams running from one end

of the car to the other. The author of the paper has evidently, by this plan, aimed to obtain the minimum of weight and a maximum carrying capacity, and I think, gentlemen, you who are practical men,—and you certainly all appear to be,—will agree with me that this is a very desirable object to be sought.

There are some questions I would like to ask Colonel Heft, and, by the way, he has kindly invited me to inspect his cars when they are put on the road. One question I have in mind is with regard to what might be the result of an end collision. I do not know whether these "I" beams running longitudinally from one end to the other of the car, will be all that is adequate, and would perform the functions and give the proper camber to the car, that the ordinary longitudinal truss rods do. You will remember that some years ago the managers of steam roads went a trifle wild, in following out the idea of reducing the dead weights of their rolling stock, until they reached a point where they almost passed the limit of safety. Colonel Heft privately advises me that he has carried through on this device a factor of safety sometimes reaching as high as twenty-five. If his strain sheets show this, he has certainly covered all the ground necessary to make the vehicle safe and one that should do good service in actual operation.

I was very careful to inquire of the Colonel whether he placed the major part of the strength on a line with the sills. When we have a collision, we do not, as a rule, collide with the clear story or the end of the bonnet; but we generally get it at the "buffer," on a line with the longitudinal timbers. Of course, we all imagine there are roads which never have accidents, and consequently they do not experience difficulties of this kind. I was also particular to ask him whether the frame above the floor truss planks (if he uses the latter,) including posts and framing, and clear story, was lightened up correspondingly. It would be rather unwise to put all of the strength in the clear story, or on a line with the roof, for the reason that if the car meets an obstruction, your roof would probably keep going and the body at the floor line remain still.

Not to occupy any more of the valuable time of this meeting, I would ask the author of the paper whether he has sufficient strength in the transverse members and longitudinal "I" beam, as shown by the drawing, to overcome the difficulties which have been outlined?

REMARKS OF MR. N. H. HEFT ON "DOUBLE-TRUCK CARS."

Mr. Heft—I will say, in reply to Mr. Chamberlin, that I have endeavored to get all of the strength longitudinally, lightening the upper portion of the car, but constructing it in such a manner that the upper portion is braced to the lower portion and tied to it, both longitudinally, vertically and otherwise. I would say, for the information of the members, that we have under contract the construction of five of these cars. We expect that the first one will be turned out in from four to six weeks. We expect to operate this car from Port Chester, New York, to New Rochelle, New York. I would be very glad to show the car, when in operation, to any of the members of the Association. I may be wrong in my ideas concerning this car, but we are putting up our own money to build it. If it is a failure, we will have to foot the bills. [Applause.]

REMARKS OF MR. W. E. HARRINGTON ON "DOUBLE-TRUCK CARS."

Mr. W. E. Harrington, Camden—The question of four-motor equipments seems to be one of a mooted character. There are a large number of roads using four-motor equipments, but there seems to be, relatively, very little known as to the number of watt hours per car mile which the different equipments require, and with the idea of bringing out that point as a feature of discussion, I would like to place this question before the meeting: What is the experience of those present, who have made tests, as to the watt hours that are required by the different equipments used? Mr. Foster says it takes more power with the four-motor equipment, and Colonel

Heft says it takes less. They are both highly representative men, and yet they differ on this point. Our road is about to place some equipment orders. I have been urging four-motor equipments, and yet I must confess I am somewhat in the dark as to the relative merits of the different equipments. I know from tests I have made that the double-truck, forty-foot car, equipment, with two 38-B Westinghouse motors, on maximum traction trucks, have taken an average of 2,000 watt hours per car mile, whereas the same weight of car, with the center pivotal truck, with two No. 49 Westinghouse motors, 35 horse-power, under identically the same conditions, takes an average of only 1,200 watt hours per car mile, against a single truck car, eighteen-foot body, under similar conditions, which takes an average of 900 watt hours per car mile.

I would like to know if there is any data from actual test to show the number of watt hours consumed by four-motor equipments? I have made a series of tests on different classes of cars, showing the watt hours. I deem this matter of very great interest, and I will file with the Secretary a statement of the results secured in these tests. I did not encounter any difficulty in getting information of this character, and I think the information obtained by me would be interesting to the other members, in showing the number of watt hours consumed per car mile with the various forms of equipment and with two-motor equipments.

On the following page is the table referred to by Mr. Harrington.

Mr. Heft—In answer to the gentleman, I will say I have not the figures of the tests at hand, and do not remember the figures, but we have made a series of tests during the last three years with double-truck cars, equipped with one, two, and four motors, as I have stated in the paper, and we have kept a very close and accurate record of the results. The weights of the different trains on which these tests were made varied from fifteen tons to two hundred and fifty tons. The speeds varied from ten to sixty-five miles an hour.

There is no place where the car is operated with an in-

TABLE OF TESTS

Made by Mr. W. E. Harrington, General Manager of the Camden and Suburban Railway Company, Camden, N. J., showing number of Watts Hours, per Car Mile, with Different Equipments.

Date.	Car.	Controller.	Average Points.	Resistance.	Truck.	Diam. Wheel.		Wheel.		Weight Wheel with Axle.		Motor.		H. P.	Av. Watts.	Average Volts.	Average Amperes.	Full Speed.	Time Using Current.	Time Coasting.	Between Had-donfield and Fed. St. Ferry, up and down.	Time Start to Stop.	Watts Hours Per Car Mile.
						Large.	Pony.	Thread.	Base.	Large.	Small.												
Aug. 17	120	K-11	3.5	No. 3 West. Col.	St. Louis, Dble.	33"	24"	2"	4 2"	1125 lbs	725	2-38-B.	50	24,250	485	50.8	185	70.27.4 min.	10.6	To Ferry	6.99.38	3002	
" 17	120	K-11	4.	No. 3 West. Col.	St. Louis, Dble.	33"	24"	2"	4 2"	1125 lbs	725	2-38-B.	50	22,419	477.5	47.4	200	70.26.75	12.25	To Had.	7.35.39	1845	
" 21	134	K-10	5.2	G. E. 1-101, 1-102	Brill 27-G, Dble.	33"	33"	2"	4 2"	2-No. 3 West.	30	17,719	470	37.7	160	60.31.75	10.5	To Had.	7.35.42.25	1690	
" 21	134	K-10	4.8	G. E. 1-101, 1-102	Brill 27-G, Dble.	33"	33"	2"	4 2"	2-No. 3 West.	30	14,382	470	30.6	125	40.27.2	9.8	To Ferry	6.99.37	1249	
" 23	114	K-10	3.1	No. 3 West. Col.	Brill 21-C.	33"	33"	2"	6 6"	900 lbs	900	2-Walker No.5.30	30	9,928	488	18.5	85	35.23	14	To Ferry	6.99.37	795	
" 23	114	K-10	2.8	No. 3 West. Col.	Brill 21-C.	33"	33"	2"	6 6"	900 lbs	900	2-Walker No.5.30	30	7,986	493	16.2	40	37.27.4	14.6	To Had.	7.35.42	700	
" 16	58	D	.....	Davis West.	Manier	33"	33"	2"	6 6"	950 lbs	1-No. 3 West.	30	7,055	538	13.3	60	.....	.....	Mer. to C.	4.34.29.75	812
" 16	58	D	.....	Davis West.	Manier	33"	33"	2"	6 6"	950 lbs	1-No. 3 West.	30	13,494	519	26	60	.....	.....	Bridge to C.	3.43.18	1180
" 22	129	K-10	3.01	G. E. 2-1042, 1-102	Brill 27-G, Dble.	33"	33"	2"	6 6"	1050 lbs	2-No. 49 West.	35	15,357	451.7	24	125	60.31.4	15.2	To Had.	7.35.47	1479		
" 22	129	K-10	2.8	G. E. 2-1042, 1-102	Brill 27-G, Dble.	33"	33"	2"	6 6"	1050 lbs	2-No. 49 West.	35	11,988	444	27	118	50.22	16	To Ferry	6.99.38	1034		
" 24	80	K-10	3.8	Westinghouse	Brill 21-E.	33"	33"	2"	7	1050 lbs	2-No. 3 West.	30	9,541	470	20.3	80	33.27	13	To Had.	7.35.40	864		
" 24	80	K-10	3.4	Westinghouse	Brill 21-E.	33"	33"	2"	7	1050 lbs	2-No. 3 West.	30	8,058	474	17	72	32.24.3	11.7	To Ferry	6.99.36	690		
" 20	107	K-10	.....	No. 2 West. Col.	Brill 21-A.	33"	33"	2"	6 6"	1050 lbs	2-No. 3 West.	30	9,086	488	17.8	65	33.22	14	To Ferry	6.99.36.5	781	
" 20	107	K-10	3.2	No. 2 West. Col.	Brill 21-A.	33"	33"	2"	6 6"	1050 lbs	2-No. 3 West.	30	8,892	494	18	88	35.24.5	15.5	To Had.	7.35.40	804		

crease of current with the four-motor equipment, except while accelerating, but a quicker and higher acceleration is gained by this increased consumption of power. The average consumption of current, however, and even the total consumption of current, in the running of the cars, is less with the four-motor equipment than with the two-motor equipment. That is beyond dispute. I can furnish data to that effect, and I think the General Electric Company, and the Westinghouse Company also, can furnish any of our members with data which will substantiate that statement. It is unquestionably correct.

Mr. Wason, Cleveland—I would ask if the additional cost of drilling the hole through the axle and armature shaft is commensurate with the results; and whether you are seeking to lighten the axle or to be assured of the quality of the material?

Mr. Heft—In reply to Mr. Wason, I will say that I am willing to admit that the drilling of the axle is a debatable question. About five years ago we commenced to use hollow axles on our high-speed motors, and the results have been so favorable in the way of lessening hot boxes, hot journal bearings, and everything of that kind, that we have decided to adopt that form of axle. It decreases the weight about twenty-five per cent., with a loss of strength, varying, according to the size of the axle, from only three per cent. to five per cent. We have never had any of them break. We had a great deal of trouble with our axles on our heavy high-speed motors, and we found it necessary to increase the diameter and weight of the axles. We were loath to do this, and so we adopted the plan of drilling a hole through the axle to lighten it. We not only lightened the axle, but we obtained the benefit of having a ventilated axle. It overcomes crystallization in the axle.

REMARKS OF MR. JOHN I. BEGGS ON "DOUBLE-TRUCK CARS."

Mr. J. I. Beggs, Milwaukee—In connection with the statement that four motors take no more current than two motors,

I would ask Colonel Heft whether he meant four motors of the same size, or two motors having the same capacity as the four might have had?

Mr. Heft—We have made experiments with motors of different capacities, but all of the motors were of the same size, and used on the same class of equipment.

Mr. Beggs—I do not know whether I made myself clear. We made some very exhaustive tests, and they were so opposed to the position which Colonel Heft now takes, that I took occasion to have representatives of the General Electric Company witness the tests made on this mooted question of the amount of current consumed by these different equipments. Of course, this matter is a very important one to all of us.

I might say that we adopted double truck cars as a standard for our entire system five years ago, and are continually increasing the number. We have given a great deal of attention to the development of the most advantageous and durable car, the car which will best stand the strains to which Mr. Chamberlin referred, as ours is one of the roads that has collisions, unfortunately, and some pretty severe ones. We operate two hundred and fifty miles of road, and have one electric line sixty-one miles in length. We try to build the equipment so that it will be interchangeable, for city or suburban service, as we have a consolidated system, and run the cars interchangeably.

I must take issue with Mr. Heft's statement, to the effect that four motors do not take more current than two motors. If you equip a car with two G. E. 1,000 motors, or four 1,000 motors, I think any company when it pays for the current, will pay for twenty per cent. more for four motors than for two motors; but it will get fifty per cent. better service with the four motors. That has been our experience. Our cars for three years were equipped with two motors. For the past two years, after careful experimenting and taking into account the various costs—of which the smallest is power—we have adopted four motors as a standard, be they of whatever size they may. We believe we can get much better results from 150

horse-power in four motors under a car, than we can with 250 horse-power in two motors under the car. That is our experience. The results may differ in various sections of the country, but with us, the four motors have certainly taken from twenty to twenty-five per cent. more current than two motors, running under exactly similar conditions, not for the purpose of test, but in regular service on long distance and city lines, with watt-meter, voltmeter and ammeter, so as to cover all the points. The use of four motors is very important on our standard car, which is forty-one feet over all, and seats forty-four passengers, with cross seats, and weighing somewhat heavier than the car referred to by Mr. Heft. I trust that Mr. Heft will succeed in making his car all that he desires.

I was very much interested in the points raised by Mr. Chamberlin, as we have found that, in order to put a car on the tracks in our city so that it will stay there, in spite of head-on collisions, as we sometimes have, even with the greatest degree of care, it requires some weight and strength to withstand the shock so that the car will not be absolutely shattered. We had a case recently with a green motorman on a curve, where the car was thrown off the tracks across the street, with the result that the car was not much injured except that a corner post was knocked off. I think Colonel Heft has seen how our cars are braced. We use the longitudinal truss rod and truss plank, with a rod over it. We require the strongest construction possible to be put in the car.

As stated, the results of the tests made were somewhat contrary to what the experts had given us to believe we might expect would be the draft upon the power plant, and for that reason I had representatives of the General Electric Company come to Milwaukee on two or three different occasions to see the tests made; not simply on a special car, but in the regular service, equipping different cars on our regular service with different types of motors; two G. E. 57; two G. E. 1,000, and four G. E. 1,000 under different cars. I do not believe there is any question that the four motors will take more current,

but, as has been said, you get quicker acceleration and have no slipping wheels. We are going to put four motors on all the cars we equip in the future. The higher speed you can make compensates for the increased power consumed. In the city service, where we use these cars, with blocks running from three hundred feet to four hundred feet in length, it is an important matter if you can save a few seconds on each block in getting the car into rapid motion; and when the car gets on a slight grade, or starts on a slippery rail, it will immediately pick up and start without spinning the wheels. That is what the four motors will do. I believe that four smaller motors are much more effective than, perhaps, fifty per cent. increased capacity in two heavier motors. I give you our experience, for the reason that we have some three hundred of these double truck cars running. We run a complicated system, but it is run as one entire system. If we have a certain call for cars on any of our interurban lines, we can take our city cars for this purpose, because they are interchangeable.

In order to compete with our friends of the steam railroads we are now giving our attention to the development of a new car that shall be fifty feet over all, upon which we propose installing four motors, of the same general character as the G. E. 73. They are 75 horse-power each. The steam railroads throughout our Western country are beginning to realize they have a real competitor in electric lines in distances of fifty or sixty miles, and as a consequence they are reducing the rates of fare very materially and putting on additional high-speed trains to run short distances. We propose building electric cars for the double purpose of being able to make fifty to sixty miles an hour with four motors aggregating about 250 to 300 horse-power, and with the further purpose that in case we have a congestion of travel on any of the lines running to our summer resorts, we can couple on three trailers to the car and handle a larger body of people at a much reduced cost. We may have peculiar conditions in our city, but that is one of the things we have in mind. With these cars we should want a more substantial construction than the cars shown in the

drawings which have been submitted to us, although these cars may be all right for the service for which Mr. Heft designed them.

Mr. Heft—I wish to say, in reply to Mr. Beggs, that his statement is true, judged by his conditions, while I also insist that my statement is true taken from my conditions. Mr. Beggs' cars, I believe, are operated largely through city streets and are stopped and started frequently; and, as I stated in reply to Mr. Foster, there would be a greater current consumption in producing the acceleration of the car when starting and stopping so often.

Mr. Beggs—I might state, gentlemen, that this test was not made on a city line. It was made on our Waukesha line, a twenty-mile road, with a train every hour each way. We make the run in fifty-five minutes, and keep up hourly service with two cars. The test was made on that high-speed line, upon which there are very few stops and sometimes no stops in a distance of several miles.

Mr. Heft—Then I must insist, under that condition, that my statement is correct. [Laughter.] I will say, to satisfy Mr. Beggs, if he will come down to inspect our system, I will give him an opportunity to witness a test, and if he does not agree with me I will pay his expenses to Meriden and back.

Mr. Beggs—It will be a pleasure and worth the expense to spend a day with the Colonel, independent of the test; but I shall take advantage of the opportunity he offers to have this test made.

I was told what the Colonel tells us, but it did not agree with my own practical experience, and what I considered would be the result when I was seriously considering three years ago, this very question of whether we could afford the current consumption required for four motors. The first report which came to me from a gentleman whom I considered to be a highly scientific, technical engineer, harmonized with what Colonel Heft has told us, and the report went further and said that four motors saved ten per cent. in power, and he submitted the figures to demonstrate it. Then I concluded I

would call in other experts, and went on the cars myself with these gentlemen, and spent several days with them, with the result that I found it took fully from twenty to twenty-five per cent. more current with four motors than with two motors, on the same character of service, the same cars and load, and running exactly during the same hours, as we made the tests on different days so as to get exactly the same conditions.

FURTHER REMARKS OF MR. E. C. FOSTER ON "DOUBLE-TRUCK CARS."

Mr. Foster, Lynn—The conditions under which Colonel Heft has been making tests are different from the ordinary conditions under which street railways operate, as I understand it. The conditions there are these: That the test was made upon a steam railroad roadbed, with the stops made at infrequent intervals; that is to say, that the run would be made from one station to another, and it might be two or three, or five, or even ten miles in distance. That being so, I think it is possible, and without a doubt it is true, that they do operate as he says, without consuming a greater amount of current than they would with two motors. Our experience has been in operating four motors on the same type of car, over the same road, under the same conditions, as near as it is possible to obtain them, that it requires from fifteen per cent. to twenty-three per cent. more current to operate four motors than two motors. We make tests twice a year, and pay for current on that basis, and we believe that the tests are carefully made, as they are made by the representatives of the Boston Elevated Railway Company, over whose tracks we operate, and which furnishes power to our company, and representatives of our company.

REMARKS OF MR. CHARLES W. WASON ON "DOUBLE-TRUCK CARS."

Mr. Wason, Cleveland—On one of our suburban lines we started three years ago and put two 75 horse-power motors on each car, and found it almost impossible to make our time in

the city, due to wet and greasy rails, or in the country where there were grades. We put on two motors, thinking to eliminate one-half of the repairs. Later we removed the two 75 horse-power motors and put on four 50 horse-power motors with much more satisfactory results as we were enabled to make our time, and in our opinion consumed but a very small amount of power more than that taken by the two 75 horse-power motors. I think there is no question but for our suburban work four motors are preferable to two motors, no matter what the size of the motors are.

The lightening up of the car for suburban work seems to me a little questionable. I think Colonel Heft will a year from now be able to give us more definite data on this subject than is possible at present. We have been strengthening our cars from the start rather than making them lighter. They sometimes leave the track for a shorter and more direct route across the fields, which is not always conducive to the healthy condition of the rolling stock, to say nothing of the passengers. It seems to me we ought not to consider making the cars lighter unless you are running a car shop, as possibly some of these gentlemen are; or are interested in the manufacture of cars and wish to repair or supply us with new rolling stock. The ordinary railroad man buys his equipment and expects it to last a reasonable length of time, and it seems to me that it must be strong. The weak places as shown in actual service should be strengthened, and I think the car should be made stronger; if, of course, this can be accomplished and the car made lighter, a very satisfactory result will be secured. In steam railroad car practice the car is cambered up in the center. In the first of our suburban cars the manufacturer insisted upon cambering the cars up in the center, but we found after use that we could put the camber there ourselves. The trouble is to keep it from bulging up at this point so that a truss rod in a car but forty feet long is, in my opinion, useless.

Mr. Harrington—I would ask Mr. Beggs what the tests showed where they ran two No. 57 motors, compared with four G. E. 1,000 motors—whether the results from the four

G. E. 1,000 motors showed a lesser consumption in power than they had in the use of the two No. 57 motors?

Mr. Beggs—The current was less on the four G. E. 1,000 than on the two No. 57.

Mr. Harrington—Did not you get better results?

Mr. Beggs—We got quicker acceleration. I want to say here, as our experience, and throw out a suggestion as opposed to what might be inferred from Mr. Foster's remarks, that whether your service is for eight miles an hour, about the standard for city service—our city service is maintained pretty close to nine miles an hour on the average—whether your service is for eight miles, or fifteen miles, or for fifty miles an hour, put four motors under a double truck car. The distance does not make any difference whatever. The main question with many roads in this matter is the increased investment, but you will save the interest on the increased investment in reduced cost of maintenance. It costs considerably less to maintain four motors under a car of the same size than it does to maintain two motors under the same car.

Mr. Heft—To remove any doubt from Mr. Wason's mind as to this car, I will say that at the present time I have not a dollar's worth of stock in any car-manufacturing plant.

President Roach—We would be glad to hear from Mr. E. G. Connette, of Syracuse, N. Y., on this subject.

REMARKS OF MR. E. G. CONNETTE ON "DOUBLE-TRUCK CARS."

Mr. Connette—Mr. President, Mr. Beggs has just answered the question I was going to ask, whether or not the increase in the efficiency of the motors by reason of having four motors rather than two, would compensate for the increase in the investment. I presumed that would be the case with four motors as compared with two motors. Mr. Beggs states that the maintenance is less. I wanted to know something about that point, and as that question has been answered, I do not think I have anything further to say.

President Roach—Gentlemen, we have Mr. Vreeland, of

New York, with us this morning. He has been in attendance throughout the meeting. I would like to have him say something on this subject, or such other subject as he may wish to talk upon. He is a very busy man and he has come out here, and we ought to have some benefit of his great knowledge of the business.

REMARKS OF MR. H. H. VREELAND ON "DOUBLE-TRUCK CARS."

Mr. H. H. Vreeland—Mr. President and Gentlemen: We have gotten into rather a technical discussion. I do not claim to be a technical man. The peculiar conditions in New York do not warrant the use of standard double-truck cars with four motors. Such cars are operated on a number of lines controlled by the syndicate which owns the New York lines. Wherever it is possible, and we are not held down to the matter of a sixteenth of an inch in step heights, as we are in Greater New York, we go to the square body car, and use the four motors. The narrowness of our streets in New York is such that on longitudinal lines, where traffic is dense, we have to conform to the old type of construction, with sunk panels, in order to avoid blockading. We have a number of cross streets through which the important lines operate, and the difference between the sunk panel car and the square body car on these lines, means keeping the line in operation all the time, as against stoppages every once in a while of from ten to twenty minutes. On our Fifty-ninth Street line, running east and west across town, if an ordinary truck is standing at the curb, the hub will go under the sunk panel of our car; and if we used a square body car, we should not be able to pass. We also find it necessary to have folding step-boards on our open cars.

As I said not long ago, we are not trying to do artistic rail-roading in New York. We are meeting conditions and conforming to them instead of wasting time in trying to change them. I had a man recently say to me he thought it was an unwise thing to have step-raisers under the control of the motorman of an open car. It means to us on the down-town

streets of New York that the motorman can signal the conductor to raise the step and pass a truck without a stoppage of the car, which, under the ordinary conditions of a solid step, means a stoppage of the car, and when you are running the cars five seconds apart, as we do in Center Street, it is a great advantage to be able to raise the step and allow the car to move on.

The proposition under consideration is so local with us in that respect, that to discuss it from the standpoint these gentlemen have discussed it, would not amount to much, except as concerns our experience with the Consolidated system in New Jersey, where we run high speed, long distance, inter-urban cars. On that system, we use the large type of car with four motors. We get the largest carrying capacity car we can with the highest speeds, in order to compete with the surrounding steam railroads, not considering particularly whether there is more or less power consumed. We have long lines and in every instance they are in competition with the steam railroads.

The Board of Railroad Commissioners of the State of New York made a very thorough test of brakes. While we had nothing to do with that test, our men put on the instruments. There having been for a long time a question which car used the most power, we made some experiments and found that, with the same sized motors on single and double truck cars, there was an increase of about twenty per cent. in the consumption of current in the double truck car. I speak of this, because I am uncertain whether it was due to the increased weight of the car or the increased length of the car.

As far as the question of general car construction is concerned, which has been discussed here, we have not to consider so much the question of collisions at high speeds, as we have the question of a "hogging" of the cars, as we term it; and as our friend Mr. Wason says, it is no trouble at all to get any kind of a camber in our Broadway cars, as the normal condition of the cars is such that, as my friend Colonel Heft says, he usually prefers to walk downtown and leave room for three passengers in the car.

President Roach—Gentlemen, we have with us Mr. Charles S. Sergeant, of Boston, who has had considerable experience in street railroad matters, and I take pleasure in calling upon him.

REMARKS OF MR. CHARLES S. SERGEANT ON "DOUBLE-TRUCK CARS."

Mr. Sergeant—Mr. President and Gentlemen: I have been extremely interested in this paper which Colonel Heft has presented. I want to say, in the first place, that I have seldom seen so much valuable matter so admirably put in such few words. I think this paper is a model of brevity and information.

On the question of power, of four motor cars versus two motor cars, or two motor cars versus one motor car, there seems to be considerable difference of opinion. While we have had no experience in actual service with four motor cars, for the purpose of determining what the power consumption was, we made some very careful tests, under what would be ordinary conditions, and put four of them on one car, with the ordinary railway motors of different types, and under these conditions we found that we got a little better acceleration with the four motors. We got, as a matter of fact, ten per cent. decrease in time, better speed, but we had to use fifty per cent. additional current to get it. I should suppose the question is one of local conditions. Certain electricians have been trying to persuade me for years that two motors consumed less power than one motor. We have records covering a good many years showing that one motor consumes less power than two motors.

In regard to our elevated equipment, possibly we have been making a mistake. What we are intending to use is motor cars having one motor truck with two 150 horse-power motors on that truck. One motor truck and one trailer truck, every car a motor, using the multiple control system. I hope inside of the next year, if you come to Boston, we can show it to you in successful operation. It will be the only elevated road which will go underground as well as elevated, and we have

to overcome long grades of five per cent., and descending grades of eight per cent., and, therefore, we feel we want the greatest provision we can get for acceleration.

Mr. Heft—There is a gentleman in the room who has had a great deal of experience making tests with trucks mounted with one and two motors. I think he will give a reason why any car equipped with four motors, with all the eight wheels available as drivers, gives better results than a two-motor equipment. I would like to hear from Mr. Ira A. McCormack, of Cleveland, O.

President Roach—I take pleasure in calling upon Mr. McCormack to address us on the subject.

REMARKS OF MR. IRA A. McCORMACK ON "DOUBLE-TRUCK CARS."

Mr. McCormack—Mr. President and Gentlemen: While I was with the Brooklyn Rapid Transit Company, the president of that company thought it was advisable to have double truck cars, and the first car that was built had the wheels all of one size. The question then came up whether it was advisable to put four motors on the car or two motors. Tests were made to decide this question, and it was finally decided to equip the car with two motors, on account of maintenance. An order was placed for double truck car bodies. We had not yet determined whether we had the right kind of truck and whether it was still advisable to use the four motors or to use the two motors. We had some maximum traction trucks on the road, and in making the test in regard to the power and the efficiency in acceleration, it was found that the maximum traction truck was giving much better service. In consequence, we adopted the maximum traction truck, and I believe it was the only truck we could work with two motors and continue the service in Brooklyn. Later on fifteen cars were equipped with trucks that had wheels all of one size. We had to pull those cars off the road whenever we got three or four inches of snow on the ground. It was absolutely impossible to get them over the road. I complained to the president of the company, but

he thought I was wedded to the maximum traction trucks and insisted on running them. One day he happened to be at Richmond Hill and was going to Brooklyn. It was a twenty-four minute run from Richmond Hill to Ridgewood. The President got on one of the cars with wheels all the same size, and he was fifty-two minutes getting to Ridgewood. He thought the motor wheels traveled a thousand miles. These cars were equipped with two motors. The next day we discontinued the use of the fifteen cars, because we had so many delays. They dragged the road and it was found impossible to operate them.

When I went to Cleveland I found that all the cars were double truck cars, with wheels the same size. Some time ago I had a cyclometer put on the driving wheel, the wheels equipped with the motor, and a cyclometer on the idle wheel, and the record showed that the driving wheel made a great many more revolutions than the idle wheel.

I do not know that I can say much more, Mr. President, for the information of the gentlemen, but I want to say, in reference to Mr. Heft's paper, that it will give us more food for thought and study than any other paper presented to this Association. There is one important thing he speaks of, and that is doing away with the brake beams, having the brakes hung and operated direct without brake beams. I think that is something that can be appreciated, particularly in view of the trouble we have had in regard to chattering brake beams and brake beams catching up rubbish on the road, and sometimes when we have accidents, we find that brake beams are a large factor in them.

REMARKS OF MR. ROBERT McCULLOCH ON "DOUBLE-TRUCK CARS."

Mr. McCulloch, Chicago—Mr. President and Gentlemen: Colonel Heft's paper has been discussed almost entirely on the question of economy in power, and from the standpoint of the strength of the car in its construction to resist damage from collisions. Most of us who have been in the street railroad

business a good many years remember when our cars were only ten feet in length, and to-day we have them forty-six feet in length; then they weighed 4,000 pounds, and now they weigh 40,000 pounds. Then we had only one-horse power, or two-horse power, and now we have 268-horse power. We did not consider the question of power at all, nor the question of the strength of the car to withstand shocks. We were considering how we should be able to carry more passengers, and how we could better please the man who has the nickel. I do not think it is a question at all whether we shall use a little more horse power or not, if we can carry in greater safety the passengers who are in our cars; and if we can carry a larger number of passengers, we can very well afford to burn an additional bushel of coal, if we can carry a few more passengers to pay for it.

As to the collisions which have been referred to, and the construction of the cars to withstand the shocks, I suppose the only way to prevent collisions is to run a road with only one car. When we have a collision, we do not consider what has become of the car, whether its tranverse section is weak, or how much it will cost to repair it. What we do is to institute inquiries to find out whether there was some woman in the car whose tranverse section was weak, and we shall have to pay for it. [Laughter.]

President Roach—Gentlemen, you have heard the paper read and the full discussion which has been had upon it. What is your further pleasure in regard to the paper?

Mr. McCulloch—I move that the paper be received and placed on file, with the thanks of the Association to Colonel Heft for having written it. (Carried.)

President Roach—Gentlemen, the next order before the Convention is the report of the Committee on Nominations. This committee will also include in its report a recommendation as to the next place of meeting.

Mr. McCulloch—With the consent of Mr. Rigg, the Chairman of the Committee on Nominations, I would like to make a statement. In suggesting those who shall be our officers for

the coming year, some member of our Committee on Nominations has guaranteed strict attention to the duties of the office by each of those we recommend, and we will ask any gentleman who is nominated, if he does not mean to attend to the duties of his office, if he is elected thereto, and give his earnest support in helping to carry the Association along in a successful way, and give his personal attention to the meetings of the Executive Committee, we would like to have him decline the election, and let some one else be put in his place who will attend to the duties of the office.

REPORT OF THE COMMITTEE ON NOMINATIONS.

Mr. Rigg, Chairman of the committee, presented the following report:

Kansas City, October 18, 1900.

To the President and Members of the American Street Railway Association—

Gentlemen: The Committee on Nominations respectfully reports that it recommends New York, N. Y., as the next place of meeting, and also recommends the following gentlemen for officers of the Association for the ensuing year:

For President,
WALTON H. HOLMES,
President Metropolitan Street Railway Co.
Kansas City, Mo.

For First Vice-President,
HERBERT H. VREELAND,
President Metropolitan Street Railway Co.
New York, N. Y.

For Second Vice-President,
N. H. HEFT,
President Meriden Electric Railroad Co.
Meriden, Conn.

For Third Vice-President,
JOHN B. McCLARY,
General Manager Birmingham Railway, Light and Power Co.
Birmingham, Ala.

For Secretary and Treasurer,
T. C. PENINGTON,
Treasurer Chicago City Railway Co.
Chicago, Ill.

Nineteenth Annual Meeting.

FOR EXECUTIVE COMMITTEE:

PRESIDENT, VICE-PRESIDENTS

and

JOHN M. ROACH,

President Chicago Union Traction Co.
Chicago, Ill.

FRANK L. FULLER,

General Manager Wilkesbarre and Wyoming Valley Traction Co.
Wilkesbarre, Pa.

GEORGE W. BAUMHOFF,

General Manager St. Louis Transit Co.
St. Louis, Mo.

JOHN R. GRAHAM,

President Brockton Street Railway Co.
Brockton, Mass.

JOHN HARRIS,

Superintendent Cincinnati Street Railway Co.
Cincinnati, Ohio.

The following resolution was unanimously passed by the Committee:

Resolved, That the next meeting of the American Street Railway Association be limited to three days instead of four, and that the day set apart for the personal examination by members, of the Supply Men's exhibit, be the *middle* day of the interval.

Very respectfully submitted,

JOHN A. RIGGS,

Chairman,

ROBERT McCULLOCH,

E. G. CONNETTE,

E. C. FOSTER,

D. B. DYER,

Committee on Nominations.

President Roach—Gentlemen: The election of officers is by ballot, and I will appoint Mr. McCulloch, of Chicago, and Mr. Beggs, of Milwaukee, to act as tellers.

Mr. Bean, St. Joseph—I move that the Secretary be authorized to cast the unanimous ballot of the meeting for the gentlemen nominated. (Carried.)

The Secretary duly cast the ballot and the President declared the gentlemen nominated to be duly elected as the officers of the Association for the ensuing year.

SUBJECTS FOR REPORTS FOR NEXT MEETING.

President Roach—The Secretary makes a wise suggestion, and that is that all members of the Association as soon as possible send to him a list of subjects upon which they would like to have papers prepared for the next meeting; and at the same time suggest some suitable person to write the papers. It will facilitate the labors of the Executive Committee very much if you will do this, and I need hardly say that it will add very much to the interest of our next meeting.

RESOLUTION OF THANKS TO PASSENGER ASSOCIATIONS.

Mr. Rigg, Reading—Mr. President, I desire to offer the following resolution:

Resolved, That the members of the American Street Railway Association, in annual meeting assembled, express their thanks to the several Passenger Associations of the United States for their courtesy in granting reduced rates to the members of this Association and their friends, who are in attendance upon our annual meeting. (Carried.)

VOTE OF THANKS TO THE OFFICERS AND EXECUTIVE COMMITTEE.

Mr. Heft, Meriden—I move that the thanks of the members of this Association be tendered to our able and genial President and the other officers of the Association, for the very satisfactory manner in which they have conducted the affairs of the Association during the past year.

The motion was carried by a rising vote.

VOTE OF THANKS TO THE METROPOLITAN STREET RAILWAY COMPANY AND THE LOCAL COMMITTEE.

Mr. Vreeland, New York—Before we adjourn, it would seem that it would be proper for this Association to express its appreciation of the entertainment that has been extended to the delegates and supplymen at this convention by the Metropolitan Street Railway Company, of Kansas City, and by the leading citizens of Kansas City, whose generosity has never been paral-

leled in my experience in connection with associations of this character; and that we thank them, and the Local Committee of Arrangements, for their kindly efforts in our behalf.

The motion was put and unanimously carried.

CLOSING REMARKS OF PRESIDENT ROACH.

President Roach—There will be no further meeting of the Association, but we will adjourn until to-morrow night at seven o'clock, to meet at the Coates' House for the annual dinner.

I desire to thank the members of this Association for their kind consideration while I have been President of the Association, and if there is anything I can do at any time to help the Association, I will be pleased to have you call upon me while here and at home. [Applause.]

I will state, in reference to the paper which was to have been presented by Mr. Nicholas S. Hill, Jr., general manager of the Charleston Consolidated Gas and Electric Company, of Charleston, S. C., on "The Store-room and Store-room Accounts," that Mr. Hill has been ill for a long time, and has been unable to prepare the paper.

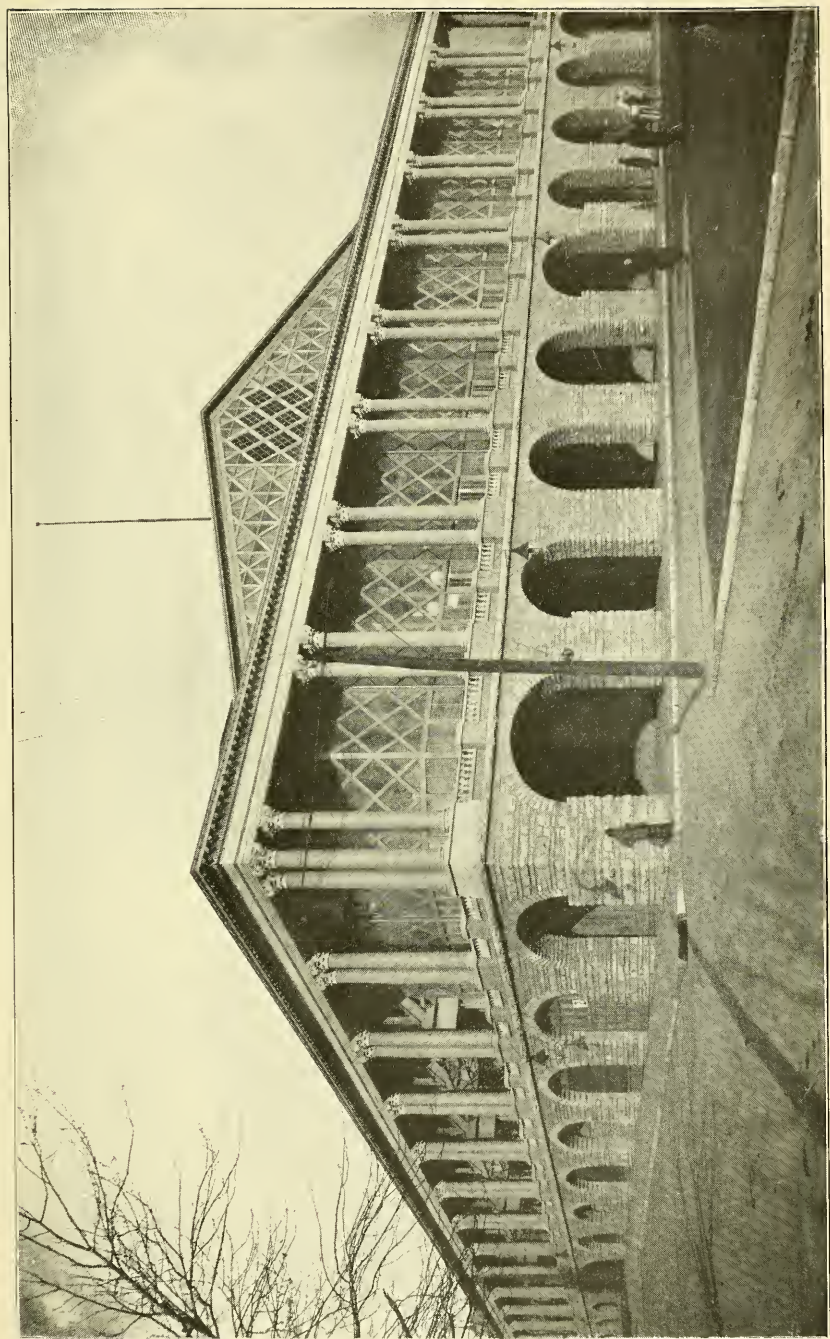
ANNOUNCEMENT OF ENTERTAINMENT.

The Secretary—According to the custom of the past few years, to-morrow will be devoted to an examination of the exhibits of the supplymen. The supplymen have arranged for a vaudeville entertainment, which will be given in this hall to-morrow afternoon, and they would be pleased to have all the street railway men present as their guests.

This afternoon, at two o'clock, a special train will leave the Union Depot for a visit to the barracks and military prison at Ft. Leavenworth and also the Soldiers' Home at Leavenworth. All the delegates and supplymen are invited to take the trip.

The East Side Electric Railway Company desires to have you all visit the Heim Park, at the terminus of its line, some time to-morrow.

The meeting then adjourned.



CONVENTION HALL, KANSAS CITY, APRIL 4, 1900.

EXHIBITORS.

The exhibition of street railway appliances at the Kansas City meeting was held in the new Convention Hall. The great amount of floor space enabled the supplymen to set off their exhibits to the very best advantage, and considering the long distances over which most of the apparatus had to be transported, the exhibit was particularly gratifying, the number of exhibitors being very nearly equal to that of former years.

As in the case of previous meetings, the last day of the Convention was set aside exclusively for the purpose of inspecting the exhibits, and the delegates very generally passed most of the day among the exhibits.

The small but important details, such as carpenter-work, sign-painting, teaming and decorating, had been so well provided for, that the annoyances usually incident to this class of service were entirely overcome, and as a result the exhibits were installed promptly and in very good order.

The supplymen tendered a complimentary vaudeville entertainment to the street railway men in the exhibit hall on Friday afternoon, which was attended by a large number of delegates who enjoyed the show. Many ladies in attendance upon the convention were in the audience.

On Friday morning the supplymen organized a street parade in true traveling show style, with a brass band and placards carried by about twenty hired men wearing animal heads of various kinds made of papier mache. The paraders visited the hotels and caused much merriment, and altogether the show furnished by the supplymen was a great success.

The work of the exhibit committee, under the chairmanship of Mr. W. A. Satterlee, was carried out in a very satisfactory manner, every detail receiving the most careful attention. There were at the disposal of the delegates, supplymen and their friends a telegraph office, telephones, postoffice, stationery, postage stamps and facilities for checking wraps and packages, all of which were free except the telegraph service.

Following is a list of the exhibitors at the Kansas City Convention :

Adams & Westlake Company, Chicago, Ill.
American Brake Shoe Company, Chicago, Ill.
American Car and Foundry Company, St. Louis, Mo.
American Railway Supply Company, New York, N. Y.
American Steel and Wire Company, Chicago, Ill.
American Street Railway, Paving and Improvement Company, Springfield, Mass.
American Vitrified Conduit Company, New York, N. Y.
Atlas Railway Supply Company, Chicago, Ill.

Baker-Vawter Company, Atchison, Kansas.
Bierbaum & Merrick Metal Company, Buffalo, N. Y.
Brown, Harold P., New York, N. Y.
B.-R. Electric Company, Kansas City, Mo.
Burnham & Duggan Railway Appliance Company, Boston, Mass.

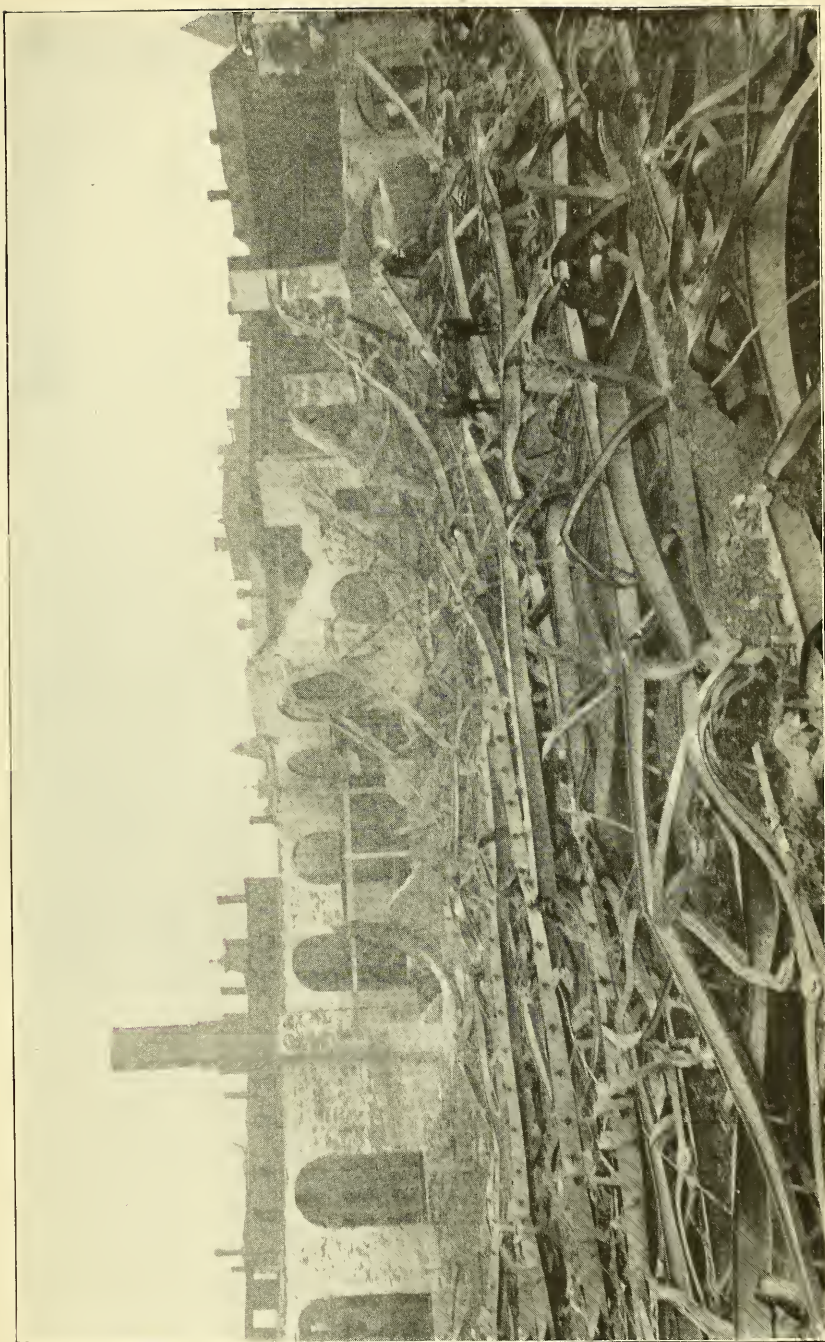
Charter Oak Stove Company, St. Louis, Mo.
Cheatham Electric Switch and Device Company, Louisville, Ky.
Chicago Mica Company, Valparaiso, Ind.
Chisholm-Moore Manufacturing Company, Cleveland, O.
Christensen Engineering Company, Milwaukee, Wis.
Consolidated Car Heating Company, Albany, N. Y.
Continuous Rail Joint Company, Newark, N. J.
Compressed Air Company, New York, N. Y.
Cramer, J. W., Kansas City, Mo.
Crane Company, Chicago, Ill.
Creaghead Engineering Company, Cincinnati, O.
Curtain Supply Company, Chicago, Ill.
Cutler-Hammer Manufacturing Company, Milwaukee, Wis.

Dearborn Drug and Chemical Company, Chicago, Ill.
Dixon Crucible Company, Joseph, Jersey City, N. J.
Duff Manufacturing Company, Allegheny, Pa.

Electrical Review Publishing Company, New York, N. Y.

Fuller-Warren Company, Milwaukee, Wis.

Garl Electric Company, Akron, O.
Garton Company, W. R., Chicago, Ill.
Garton-Daniels Company, Keokuk, Ia.
General Electric Company, Schenectady, N. Y.
Gest, G. M., Cincinnati, O.
Gold Street Car Heating Company, New York, N. Y.
Griffin Wheel Company, Chicago, Ill.



CONVENTION HALL, KANSAS CITY, APRIL 5, 1900.

Ham Sand Box Company, Troy, N. Y.
Heywood Brothers and Wakefield Company, New York, N. Y.
Huber, Adolph, St. Louis, Mo.
Huff, George, Lawrenceville, Ill.

International Register Company, Chicago, Ill.

Kinnear Manufacturing Company, Columbus, O.
Knell Air Brake Company, Battle Creek, Mich.

Lea Electric Manufacturing Company, Elmwood, Ind.
Lorain Steel Company, Lorain, O.

Magann Air Brake Company, G. P., Detroit, Mich.
Manville Covering Company, Chicago, Ill.
McCardell & Company, J. R., Trenton, N. J.
McGill, Porter & Berg, Chicago, Ill.
McGuire Manufacturing Company, Chicago, Ill.
McRoy, John T., Chicago, Ill.
Mercantile Lumber and Supply Company, Kansas City, Mo.
Merritt Electric Air Brake Company, New York, N. Y.
Metal Sales Company, Cleveland, O.
Meyercord Company, Chicago, Ill.
Monarch Fire Appliance Company, New York, N. Y.

National Carbon Company, Cleveland, O.
National Lead Company, St. Louis, Mo.
Newcomb, F. H., Brooklyn, N. Y.
New Haven Car Register Company, New Haven, Conn.

Ohio Brass Company, Mansfield, O.

Paige Iron Works, Chicago, Ill.
Partridge Carbon Works, Sandusky, O.
Peckham Motor Truck and Wheel Company, New York, N. Y.
Phenix Metallic Packing Company, Chicago, Ill.
Pittsburg Reduction Company, Cleveland, O.
Pomeroy & Fischer, New York, N. Y.

Ridlon Company, Frank, Boston, Mass.

Standard Paint Company, New York, N. Y.
Standard Underground Cable Company, New York, N. Y.
Star Brass Works, Kalamazoo, Mich.
Strait Manufacturing Company, H. N., Kansas City, Mo.

Street Railway Journal, New York, N. Y.
Street Railway Review, Chicago, Ill.
Street Railway Supply Company, Kansas City, Mo.
St. Louis Register Company, St. Louis, Mo.

Taylor Electric Truck Company, Troy, N. Y.
Tramway and Railway World, London, Eng.

United States Electric Signal Company, Watertown, Mass.

Van Dorn Company, W. T., Chicago, Ill.

Walworth Manufacturing Company, Boston, Mass.
Weber Railway Joint Manufacturing Company, Chicago, Ill.
Western Electrician, Chicago, Ill.
Westinghouse Electric and Manufacturing Company, Pittsburg, Pa.
Wharton, Jr., & Company, Incorp., William, Philadelphia, Pa.
Wheel Truing Brake Shoe Company, Detroit, Mich.
Winne & Kellogg, Chicago, Ill.
Wood, Charles N., Boston, Mass.

REPRESENTATIVES OF MANUFACTURERS.

Below are given the names and business connection of the representatives of manufacturers who attended the meeting, as shown by the registers of the Association:

Adams, Thomas E., Adams-Bagnall Electric Co., Cleveland.
Adreon, Jr., E. L., American Brake Shoe Co., St. Louis.
Allan, John B., Edward P. Allis Co., Milwaukee.
Allen, William B., Joseph Dixon Crucible Co., Jersey City.
Allison, J. W., St. Louis Register Co., St. Louis.
Almert, Harold, Buckeye Electric Co., Chicago.
Angerer, Victor, William Wharton, Jr. & Co., Incp., Philadelphia.
Anthony, Willis M., New Haven Car Register Co., New Haven.
Armstrong, A. H., General Electric Co., Schenectady.
Armstrong, Jr., William A., Mayer & Englund Co., Philadelphia.
Ash, E. W., Atlas Railway Supply Co., Chicago.

Baier, Frederick A., Brownell Car Co., St. Louis.
Bailey, George C., John A. Roebling's Sons Co., Chicago.
Bailey, Theodore P., General Electric Co., Chicago.
Baker, Charles Oliver, Marshall Sanders Co., Chicago.
Baker, Walter H., National Lead Co., St. Louis.
Balch, John, Electrical Engineer, Boston.
Barclay, George B., American Engineering and Const. Co., Chicago.

- Barnard, Bleecker S., American Vitrified Conduit Co., New York.
Barney, C. Henry, Monarch Fire Appliance Co., New York.
Barnum, Seth, National Lead Co., St. Louis.
Barr, James C., Weber Railway Joint Mfg. Co., New York.
Barrett, Josiah, Duff Mfg. Co., Allegheny, Pa.
Barry, J. G., General Electric Co., Schenectady.
Bartholomew, William S., Adams & Westlake Co., Chicago.
Bates, C. F., National Ticket Co., Cleveland.
Bauder, W. R., Westinghouse Electric & Mfg. Co., Pittsburg.
Bayne, Henry D., H. W. Johns Mfg. Co., Pittsburg.
Beach, H. E., New Haven Car Register Co., New Haven.
Bean, Barton T., Baker-Vawter Co., Chicago.
Benzel, Arthur, National Lead Co., St. Louis.
Berentsen, G., Westinghouse Electric & Mfg. Co., Pittsburg.
Berg, Max A., McGill, Porter & Berg, Chicago.
Berry, A. Hall, H. W. Johns Mfg. Co., New York.
Berry, Bertram, Heywood Bros. & Wakefield Co., New York.
Beveridge, A., Christensen Engineering Co., Milwaukee.
Bigelow, George S., Chicago Varnish Co., Chicago.
Bigelow, H. T., Hale & Kilburn Mfg. Co., Philadelphia.
Bixby, T. F., American Car & Foundry Co., Chicago.
Blades, W. H., Crane Co., Chicago.
Blahemore, A. B., General Electric Co., New Orleans.
Blandin, C. J., Twin City Iron Works, Minneapolis.
Blewett, Scott H., American Car & Foundry Co., St. Louis.
Bloom, B. G., Crane Co., Chicago.
Bolles, F. G., Bullock Electric Mfg. Co., Cincinnati.
Boyd, J. Robert, National Lead Co., New York.
Boyd, P. M., Lorain Steel Co., Lorain, O.
Boyer, F. N., General Electric Co., Chicago.
Boylston, George E., Western Kieley Steam Specialty Co., Chicago.
Bradley, John S., New Haven Car Register Co., New Haven.
Bragg, C. A., Westinghouse Electric & Mfg. Co., Philadelphia.
Braine, R. F., Continuous Rail Joint Co., Newark, N. J.
Brett, George E., Helios-Upton Co., Philadelphia.
Brett, James A., Electrical Installation Co., Chicago.
Brown, Harold P., Plastic Rail Bond, New York.
Brown, H. W., International Register Co., Chicago.
Brown, R. S., Westinghouse Electric & Mfg. Co., Boston.
Brownell, Frederick B., Brownell Car Co., St. Louis.
Buddecke, William A., Manville Covering Co., St. Louis.
Buehler, J. G., Columbia Machine Works, Brooklyn.
Burke, G. A., Metal Sales Co., Cleveland.
Burke, John T., Westinghouse Electric & Mfg. Co., Pittsburg.
Byrns, Robert A., Ohio Brass Co., New York.

- Calisch, J. C., General Electric Co., Buffalo.
Callinan, T. J., McGuire Mfg. Co., Chicago.
Candler, E. A., Self Oiling Trolley Harp, Detroit, Mich.
Card, W. H., W. R. Garton Co., Chicago.
Carey, O. Edward, C. F. Beckwith & Co., Scranton, Pa.
Carr, Robert F., Dearborn Drug and Chemical Works, Chicago.
Casgrain, George D., Griffin Wheel Co., Chicago.
Chamberlain, R. N., Gould Storage Battery Co., New York.
Chapin, Edward H., Fiske Brothers Refining Co., New York.
Cheatham, R. V., Electric Switching Device, Louisville.
Child, D. M., Griffin Wheel Co., Kansas City.
Christensen, N. A., Christensen Engineering Co., Milwaukee.
Chur, Walter, American Railway Supply Co., New York.
Clark, Charles S., Pennsylvania Steel Co., Philadelphia.
Clark, Frank H., Electric Storage Battery Co., Philadelphia.
Clark, William E., Continuous Rail Joint Co., Newark, N. J.
Clasen, Harry C., Meyercord Co., Chicago.
Cobb, Charles W., Chicago Mica Co., Chicago.
Cockey, Marston R., John A. Roebling's Sons Co., New York.
Coleman, Charles E., Eugene Munsell & Co., Chicago.
Combs, L. M., Berry Bros., L't'd., Detroit.
Connolly, James, American Car and Foundry Co., St. Louis.
Cooke, Henry D., Compressed Air Co., New York.
Cooke, W. J., McGuire Mfg. Co., Chicago.
Cooper, H. S., Street Railway Investments, Ithaca, N. Y.
Casper, W. P., Consolidated Car Heating Co., Albany.
Cox, Guy, Griffin Wheel Co., Kansas City.
Cramer, J. W., Cramer Car Fender, Kansas City.
Croninger, Cliff R., General Electric Co., Chicago.
Cropsey, F. W., Aultman & Taylor Machinery Co., Mansfield, O.
Curtis, George, Wheel Truing Brake Shoe Co., Detroit.
Curwen, Samuel M., J. G. Brill Co., Philadelphia.
- Darlington, F. W., Darlington Electric Fountain, Philadelphia.
Davies, Henry J., National Carbon Co., Cleveland.
Davis, Arthur W., Pittsburg Reduction Co., Pittsburg.
Dean, D. B., J. G. Brill Car Co., Philadelphia.
Dean, D. J., Griffin Wheel Co., Denver.
Delano, L. P., St. Louis Car Co., St. Louis.
De Leon, A. R., North American Railway Construction Co., Chicago.
Deming, Robert O., Eugene Munsell & Co., Chicago.
Denman, C. A., Ohio Brass Co., Mansfield, O.
De Varney, W. D., B.-R. Electric Co., Kansas City.
Dewey, H. B., Fuller-Warren Co., Milwaukee.
Dickson, D. T., H. W. Johns Mfg. Co., Philadelphia.

Dickson, W. E., Westinghouse Electric & Mfg. Co., Kansas City.
Dillon, Jesse L., American Car & Foundry Co., St. Louis.
Dodds, William E., Edward P. Allis Co., Milwaukee.
Donohoe, F. E., American Electrical Works, New York.
Donoghue, John F., Albany Grease Co., Kansas City.
Drake, F. S., St. Louis Car Co., New York.
Dryer, Ervin, Westinghouse Electric & Mfg. Co., Chicago.
Duffy, Thomas S., Auto Appliance Co., Chicago.
Duncan, John, Western Tube Co., St. Louis.
Dutton, W. A., Van Dorn & Dutton Co., Cleveland.

Ebert, H. C., Westinghouse Electric & Mfg. Co., Pittsburg.
Edmunds, Frank W., Q. & C. Co., Chicago.
Edwards, M., Consolidated Car Heating Co., Albany.
Ellis, S. P. S., Lorain Steel Co., Pittsburg.
Ensign, John, American Car & Foundry Co., Huntington, W. Va.
Espert, Robert E., General Electric Co., Schenectady.
Estep, Frank A., R. D. Nuttall Co., Pittsburg.
Evans, D. J., Lorain Steel Co., Chicago.
Evans, H. C., Lorain Steel Co., New York.
Evans, George W., Streeter Brake Shoe Co., Chicago.
Ewings, F. L., Griffin Wheel Co., Tacoma, Wash.

Fairbanks, Guy, Griffin Wheel Co., Kansas City.
Farnham, W. B., Ohmer Car Register Co., Dayton.
Faxon, George T., National Lead Co., St. Louis.
Ferguson, H. S., U. S. Water and Steam Supply Co., Kansas City.
Finney, S. H., Manville Covering Co., Chicago.
Fitch, Fred H., Electrical Installation Co., Chicago.
Fitzgerald, A., Roe-Stephens Mfg. Co., Detroit.
Flower, Walter L., Walter L. Flower & Co., St. Louis.
Forsyth, George H., Curtain Supply Co., Chicago.
Forsyth, W. H., Curtain Supply Co., Chicago.
Foutch, Edward L., B.-R. Electric Co., Kansas City.
Fulton, William H., Consolidated Car Heating Co., Albany.

Gallagher, Thomas M., Scullin-Gallagher Iron & Steel Co., St. Louis.
Gardner, James W., E. C. Darley, Chicago.
Garl, M., Garl Electric Co., Akron, O.
Garretty, John, American Car & Foundry Co., St. Louis.
Garton, W. R., W. R. Garton Co., Chicago.
Gemunder, Arthur, Ramapo Iron Works, Columbus, O.
Gilpin, V. C., Cutter Co., Philadelphia.
Gold, Egbert H., Gold Car Heating Co., Chicago.
Gordon, J. R., Westinghouse Electric & Mfg. Co., Atlanta, Ga.

Gowing, J. Parker, Pratt & Lambert, New York.
Grace, C. C., Modoc Soap Co., Cincinnati.
Graham, William W., Mercantile Lumber & Supply Co., Kansas City.
Granger, John A., New York Car Wheel Works, Buffalo.
Gray, W. H., Hanna & Gray, Chicago.
Green, W. M., Green Engineering Co., Chicago.
Grier, H. M., Pantasote Co., New York.
Griffin, George H., American Engineering & Const. Co., Chicago.
Griffin, J. M., Wheel Truing Brake Shoe Co., Detroit.
Griffiths, De Witt Clinton, Globe Ticket Co., Chicago.
Guillow, J. D., Heywood Bros. and Wakefield Co., Boston.

Haasis, A. L., Joseph Dixon Crucible Co., Jersey City, N. J.
Hall, T. A., Westinghouse Electric & Mfg. Co., Pittsburg.
Ham, A. W., Ham Sand Box Co., Troy.
Ham, R. H., Ham Sand Box Co., Troy.
Hamel, W. J., Ball Engine Co., Erie, Pa.
Hamlin, J., Christensen Engineering Co., Milwaukee.
Hammond, Edgar H., American Electrical Works, Chicago.
Hanna, J. A., Hanna & Gray, Chicago.
Harten, P. F., Electric Railway Equipment Co., Cincinnati.
Haskell, George M., J. G. Brill Co., New Haven.
Hastings, George S., Christensen Engineering Co., Milwaukee.
Hatch, Edward B., Johns-Pratt Co., Hartford.
Hawkins, E. L., Hunter Illuminated Car Sign Co., Cincinnati.
Hawley, Cornell S., Consolidated Car Heating Co., Albany.
Helmick, John B., McGill, Porter & Berg, Chicago.
Herrick, Albert B., Consulting Electrical Engineer, New York.
Hicks, J. F., Standard Paint Co., Chicago.
High, John M., Pantasote Co., New York.
Hildreth, J. C., Walter L. Flower & Co., St. Louis.
Hill, Charles Phillips, Doubleday-Hill Electric Co., Pittsburg.
Hilton, A. A., St. Louis Car Wheel Co., St. Louis.
Hodgkins, Edward W., Q. & C. Co., St. Louis.
Hollingsworth, George H., Consolidated Car Fender Co., Providence.
Hollowood, James, Edison-Brown Plastic Rail Bond, New York.
Hooper, William H., Safety Car Heating & Lighting Co., Chicago.
Hopper, S. L., American Radiator Co., Chicago.
Hornaday, Grant, B.-R. Electric Co., Kansas City.
Huber, Adolf, Street Railway Switch, St. Louis.
Huff, George, Street Railway Sweeper and Oiler, Lawrenceville, Ill.
Humphrey, C. B., Westinghouse Electric & Mfg. Co., Cincinnati.
Hunter, Lytle J., St. Louis Car Co., St. Louis.

Irwin, Clarence E., Pennsylvania Steel Co., St. Louis.

Jackson, J. Monteith, Jackson & Sharp Co., Wilmington.
Jacob, J. W., Charter Oak Stove and Range Co., St. Louis.
Jacques, H. P., Curtain Supply Co., Chicago.
Jacques, Henry W., Mercantile Lumber and Supply Co., Kansas City.
Johnson, B. V. H., Safety Car Heating and Lighting Co., St. Louis.
Johnson, D. A., Joseph Dixon Crucible Co., Chicago.
Johnson, E. H., Hazard Mfg. Co., Wilkesbarre, Pa.
Johnson, George W., Manufacturers' Agent, Kansas City.
Johnson, S. M., General Electric Co., Schenectady.
Johnson, R. H., William S. Silver & Co., New York.
Johnston, A. R., Clarence Brooks & Co., Newark, N. J.
Jones, C. W., Fuller-Warren Co., Milwaukee.
Jones, P. N., Westinghouse Electric & Mfg. Co., Pittsburg.
Jones, W., Consolidated Car Heating Co., Albany.

Kasson, Robert N., Taylor Electric Truck Co., Troy.
Keisted, J. B., National Lead Co., St. Louis.
Kellogg, Benjamin B., Winne & Kellogg, Chicago.
Kendall, W. R., Manville Covering Co., St. Louis.
Kenly, F. C., Curtain Supply Co., Chicago.
Kent, R. B., Atlas Railway Supply Co., Chicago.
Kerschner, W. R., Columbia Machine Works, Brooklyn.
Kindegaber, W. A., Meyercord Co., Chicago.
King, Charles K., Ohio Brass Co., Mansfield, O.
Kingston, W. W., Lorain Steel Co., Atlanta.
Kirchhoff, William G., St. Louis Register Co., St. Louis.
Kissam, George, Street Car Advertising, New York.
Kittle, Edward B., Sprague Electric Co., Chicago.
Kling, P. M., John Stephenson Co., New York.
Klump, George H., Green Fuel Economizer Co., New York.
Knickerbocker, H. L., Street Railway Supply Co., Kansas City.
Knickerbocker, C. K., Griffin Wheel Co., Chicago.
Knox, George W., Kohler Brothers, Chicago.
Kraushaar, C. F., Kraushaar Lamp & Reflector Co., St. Louis.

Lambertson, R. V., Griffin Wheel Co., Chicago.
Lane, R. T., Lorain Steel Co., Cleveland.
Larritt, John C., Ohio Brass Co., Mansfield, O.
Lawrie, Alvah K., Pittsburg Reduction Co., Pittsburg.
Leet, Julian S., Christensen Air Brake Co., Milwaukee.
Lehman, J. S., Columbia Incandescent Lamp Co., St. Louis.
Lehmer, Joseph R., Railway Supplies, Omaha, Neb.
Leidenger, Joseph, Dayton Mfg. Co., Dayton, O.
Leidenger, P., Dayton Mfg. Co., Dayton, O.
Lewis, Alexander H., Aultman & Taylor Machinery Co., Mansfield, O.

Lewis, Frank J., Victor Electrical Co., Cleveland.
Lewis, Francis S., Joseph Dixon Crucible Co., Chicago.
Lewis, H. George, Mayer & Englund Co., Philadelphia.
Lewis, J. F., John T. McRoy, Chicago.
Lewis, Victor, Victor Electrical Co., Cleveland.
Littlefield, A. S., Lorain Steel Co., Chicago.
Lockwood, Joseph E., Electric Storage Battery Co., Detroit.
Lowry, J. R., J. R. McCardell & Co., Newark, N. J.
Ludlow, W. E., Chisholm & Moore Mfg. Co., Cleveland.

McArthur, D., Compressed Air Co., New York.
McCardell, J. R., J. R. McCardell & Co., Trenton, N. J.
McClewe, John T., Harold P. Brown, New York.
McCowen, J. H., North American Railway Const. Co., Chicago.
McCullough, H. R., The Stirling Co., Chicago.
McKinley, B. P., E. M. Reed & Co., Kansas City.
McMahon, Philip, McGill, Porter & Berg, Chicago.
McMichael, J. G., Atlas Railway Supply Co., Chicago.
McRoy, John T., Vitri-fied Clay Conduits, Chicago.
MacDuffie, R. L., Wendell & MacDuffie, New York.
MacGovern, Frank, Rossiter, MacGovern & Co., New York.
Mace, L. H., Rumsey & Sikemeier Co., St. Louis.
Manson, George T., Okonite Co., New York.
Marks, Frank R., Metal Sales Co., Cleveland.
Mason, E. R., McGill, Porter & Berg, Chicago.
Mason, G. M., Creaghead Engineering Co., Cincinnati.
Mathews, George, Standard Paint Co., Kansas City.
Mathews, W. N., New York-Ohio Co., Warren, O.
Mayer, Charles J., Mayer & Englund Co., Philadelphia.
Mayer, Samuel, Joseph Dixon Crucible Co., Chicago.
Mead, George A., Ohio Brass Co., Mansfield, O.
Meday, Henry H., Griffin Wheel Co., Kansas City.
Medbury, C. F., Westinghouse Electric & Mfg. Co., Pittsburg.
Merrick, Frank Anderson, Lorain Steel Co., Johnstown, Pa.
Mertsheimer, Frank, Mercantile Lumber & Supply Co., Kansas City.
Metzelaar, Anthony H., Knell Air Brake Co., Battle Creek, Mich.
Miller, J. H., Spear & Miller Co., Chicago.
Milloy, Peter D., Paterson Trolley Appliance Co., Jersey City.
Mills, Frank K., Creaghead Engineering Co., Cincinnati.
Mills, Robert E., Parrott Varnish Co., Bridgeport, Conn.
Minto, S. J., General Electric Co., Schenectady.
Mithner, E. J., Auto Appliance Co., Chicago.
Mock, J. M., Edison-Brown Plastic Rail Bond, New York.
Monroe, W. S., General Electric Co., Schenectady.
Montgomery, T. S., Continuous Rail Joint Co., Chicago.

- Moore, R. E., General Electric Co., Philadelphia.
Morris, Elmer P., Morris Electric Co., New York.
Morse, George C., Rochester Car Wheel Works, Rochester.
Mowry, L. C., Stewart-Mowry Co., Chicago.
Mullen, George A., General Electric Co., New York.
Myers, Garson, Standard Railway Supply Co., Chicago.
- Neilson, J. B., National Lead Co., New York.
Nethercut, Edgar S., Paige Iron Works, Chicago.
Newcomb, F. H., Uniform Caps, Brooklyn.
Newell, F. C., Westinghouse Electric & Mfg. Co., Pittsburg.
Nitchy, J. G., Crane Co., Kansas City.
Noe, E. C., General Electric Co., Schenectady.
North, George B., Hazard Mfg. Co., Chicago.
Norwood, C., Cutler-Hammer Mfg. Co., Milwaukee.
- Oestreich, J. A., Griffin Wheel Co., Kansas City.
O'Neil, G. E., National Lead Co., St. Louis.
- Packard, W. D., New York-Ohio Co., Warren, O.
Palmer, F. E., C. A. Thompson, St. Louis.
Pantaleoni, J., Westinghouse Electric & Mfg. Co., St. Louis.
Parker, J. D., Griffin Wheel Co., Kansas City.
Partridge, James, Partridge Carbon Works, Sandusky, O.
Peck, C. A., Star Brass Works, Kalamazoo, Mich.
Peckham, Edgar, Peckham Truck & Wheel Co., New York.
Pence, Charles C., General Electric Co., New York.
Penfield, Edward Wells, Weber Railway Joint Mfg. Co., New York.
Perry, James W., H. W. Johns Co., Philadelphia.
Pietzeker, E. J., American Steel and Wire Co., Chicago.
Pimlott, W. E., J. M. Atkinson Co., Chicago.
Pixley, O. C., John T. McRoy, Chicago.
Pomeroy, Joseph, Pomeroy & Fischer, New York.
Poor, Fred. A., Weber Railway Joint Mfg. Co., Chicago.
Porter, H. F. J., Bethlehem Steel Co., South Bethlehem, Pa.
Porter, William M., Lee Electric Mfg. Co., Elwood, Ind.
Powell, C. S., Westinghouse Electric & Mfg. Co., Cleveland.
Pratt, Charles E., International Register Co., New York.
Pratt, George E., Star Brass Works, Kalamazoo, Mich.
Pratt, Mason D., Pennsylvania Steel Co., Steelton, Pa.
Priest, E. D., General Electric Co., New York.
Probasco, W. M., Westinghouse Electric & Mfg. Co., Pittsburg.
Pryor, S. F., Griffin Wheel Co., Chicago.
- Randall, F. C., Christensen Engineering Co., Milwaukee.

- Ray, William D., Hanna & Gray, Chicago.
Redick, R. J., Asphalt Roofing Co., St. Louis.
Reed, E. M., E. M. Reed & Co., Kansas City.
Reinoehl, C. W., Pennsylvania Steel Co., Steelton, Pa.
Richards, W. J., Christensen Engineering Co., Milwaukee.
Richardson, E. M., Sherwin-Williams Co., New York.
Riddle, L. E., Western Paul Steam System Co., Kansas City.
Rideout, Herbert L., Walworth Mfg. Co., Boston.
Ripley, R. H., Ellis & Ripley, Chicago.
Roberts, Lloyd, Star Brass Works, Kalamazoo, Mich.
Robinson, E. I., Laclede Car Co., St. Louis.
Robinson, John C., Harrington, Robinson & Co., Boston.
Roche, D. S., Scott Spring Co., Philadelphia.
Rosenthal, George D., General Electric Co., St. Louis.
Ross, Clarence A., Sawyer-Man Electric Co., Allegheny, Pa.
Rossman, J. G., Seckner Contracting Co., St. Louis.
Ruddick, John J., Electric Signal Co., Watertown, Mass.
Rugg, W. S., Westinghouse Electric & Mfg. Co., Pittsburg.
Russell, F. D., Rochester Car Wheel Works, Rochester.
Russell, H. A., General Electric Co., Boston.
Rustin, Henry, General Electric Co., Boston.
Rutherford, E. C., Magann Air Brake Co., Detroit.
Rutherford, John A., Pittsburg Reduction Co., Cleveland.
- Sachs, Joseph, H. W. Johns Co., New York.
Sargent, Fitz-William, American Brake Shoe Co., Chicago.
Schaefer, J. F., General Electric Co., Chicago.
Schmidt, Ferdinand C., Kinnear Mfg. Co., Columbus, O.
Schmitz, F. C., Continuous Rail Joint Co., Newark, N. J.
Schumacher, Charles, Garl Electric Co., Akron.
Scrugham, G. R., Creaghead Engineering Co., Cincinnati.
Scudder, Charles, American Brake Shoe Co., Cincinnati.
Scudder, Jr., Charles, Western Electrical Supply Co., St. Louis.
Selleck, William E., Compressed Air Co., Chicago.
Seymour, H. G., U. S. Water & Steam Supply Co., Kansas City.
Shainwald, J. C., Standard Paint Co., Chicago.
Sharp, Edward P., Bierbaum & Merrick Metal Co., Buffalo.
Silver, William S., William S. Silver & Co., New York.
Slingluff, William H., John A. Roebling's Sons Co., Chicago.
Smalley, C. H., Baker-Vawter Co., Chicago.
Smith, Clement C., The Falk Co., Milwaukee.
Smith, C. F., Buckland Paving Block Co., Springfield, Mass.
Smith, W. D. C., Street Railway Supply Co., Kansas City.
Spaulding, H. C., American Stoker Co., Boston.
Speer, John S., Speer Carbon Co., St. Marys, Pa.

Spencer, Eugene Jaccard, Safety Insulated Wire & Cable Co., St. Louis.
St. John, E. A., Joseph Dixon Crucible Co., Jersey City, N. J.
Standfield, Charles A., Dearborn Drug and Chemical Co., Chicago.
Stearns, E. H., Adams & Westlake Co., Chicago.
Stephen, J. M., B.-R. Electric Co., Kansas City.
Steringer, Luther, General Electric Co., New York.
Stewart, John A., Rossiter, MacGovern & Co., New York.
Stith, J. C., E. M. Reed & Co., Kansas City.
Stith, R. W., E. M. Reed & Co., Kansas City.
Storer, N. W., Westinghouse Electric & Mfg. Co., Pittsburg.
Strieby, F. H., General Electric Co., Cincinnati.
Suckow, Gustave, Vose Spring Co., New York.
Sutton, R. J., Christensen Engineering Co., Milwaukee.
Sutton, William, American Car Co., St. Louis.
Swan, G. W., John A. Roebling's Sons Co., New York.
Swain, R. A., General Electric Co., New York.

Taylor, Frank H., Westinghouse Electric & Mfg. Co., Pittsburg.
Taylor, John, Taylor Electric Truck Co., Troy.
Thompson, C. H., Phenix Metallic Packing Co., Chicago.
Thompson, H. L., American Steel & Wire Co., Chicago.
Tingley, Ulysses G., John A. Roebling's Sons Co., Trenton, N. J.
Titus, J. V. E., Garton-Daniels Co., Keokuk, Ia.
Tracy, E. S., General Electric Co., New York.
Trawick, S. W., General Electric Co., Atlanta, Ga.
Troutman, H. E., Buckeye Engine Co., Chicago.
Twichell, J. T., Standard Paint Co., Kansas City.

Vail, J. A., Hamilton-Corliss Engine Works, St. Louis.
Van Dorn, W. T., W. T. Van Dorn Co., Chicago.
Van Horn, V. J., Garton-Daniels Co., Keokuk, Ia.
Vogel, H. F., St. Louis Car Co., St. Louis.
Vosburgh, A. C., New Process Raw Hide Co., Syracuse, N. Y.

Wagner, Herbert A., Consulting Engineer, St. Louis.
Wait, Charles L., Jenkins Bros., Chicago.
Waller, Thomas H., Baker-Vawter Co., Chicago.
Wampler, William M., Peckham Motor Truck & Wheel Co., New York.
Ward, John E., Gold Street Car Heating Co., New York.
Ward, J. S., Merritt Electric Air Brake Co., New York.
Ward, J. S., Phenix Metallic Packing Co., Chicago.
Watson, Charles S., Metal Sales Co., Cleveland.
Watson, James, Gold Car Heating Co., Chicago.
Wattles, James F., Rand Avery Supply Co., Boston.
Watts, George E., Columbia Incandescent Lamp Co., St. Louis.

Weber, Robert G., Weber Gas Engine Co., Kansas City.
Wells, W. H., Westinghouse Electric & Mfg. Co., Pittsburg.
Wendell, Jr., Jacob, Wendell & MacDuffie, New York.
Wharton, W. Rodman, Wm. Wharton, Jr. & Co., Inc., Philadelphia.
Wheeler, William B., Devoe & Reynolds Co., New York.
Wheildon, Louis B., New Haven Car Register Co., New Haven.
Whipple, A. L., Curtain Supply Co., Chicago.
White, T. C., Central Union Brass Co., St. Louis.
Whitton, R. S., Berry Brothers, Detroit.
Wickwire, E. F., Sterling-Meaker Co., Chicago.
Wilbur, P. L., Monarch Fire Appliance Co., New York.
Williams, W. J., Cahill Water Tube Boilers, Chicago.
Wilcox, W. J., General Electric Co., Harrison, N. J.
Wiley, J. R., Standard Underground Cable Co., Chicago.
Wilkinson, Arthur L., Ohio Brass Co., Mansfield, O.
Wishart, D., Electric Third Rail and Signal Co., St. Louis.
Withee, Frederick E., U. S. Electric Signal Co., Watertown, Mass.
Wood, Charles N., Frank Ridlon Co., Boston.
Wood, T. E., G. M. Gest, Cincinnati.
Woodward, A. H., International Register Co., Chicago.
Woodworth, A. C., Consolidated Car Fender Co., Providence.
Wooldridge, Alva T., New Haven Car Register Co., New Haven.
Wright, A. M., Ham Sand Box Co., Troy.

Young, C. G., J. G. White & Co., New York.
Younglove, James C., National Lead Co., Chicago.

ENTERTAINMENT.

Mayor Reed, of Kansas City, in his address of welcome, said it was not necessary to extend the liberty of the city to the street railway delegates; that he never knew a lot of street car magnates that need the liberties of a city—they generally knew how to get them. This was especially true as concerns the visit of the street railway men to Kansas City, for they literally “owned the town.” The Metropolitan Street Railway Company and the other local companies left nothing undone that could in any way add to the comfort and pleasure of the people in their care during the week of the convention.

There was a set entertainment for each day, but in addition

there were many informal functions; the luncheon to the officers and Executive Committee at the Country Club on Tuesday afternoon being an especially enjoyable affair. The Elks' and Kansas City Clubs kept open house during the entire week.

The first social event of the meeting was the reception at the Midland Hotel on Tuesday evening, at which the local street railway officials and the President and other officers of the Association received the visiting ladies and gentlemen. The parlor floor of the hotel was elaborately decorated with potted plants and cut roses, and an orchestra furnished music during the evening. Refreshments were served and a spirit of good fellowship pervaded the entire occasion.

On Wednesday morning, the ladies of the convention were given a tally-ho ride through the most interesting sections of the city, making a stop for luncheon at the Country Club.

At two o'clock in the afternoon special cars, decorated with flags and bunting, left the hotels with a party of about four hundred. The objective point was the Armour packing house, the largest of its kind in the world, where the wonderful sights of the establishment were viewed with great interest. Many ladies went on the trip and they bravely remained with the party during its passage through the entire works. Those who had never been to such an establishment expressed themselves as highly pleased to have had this opportunity of visiting the plant.

The Metropolitan Street Railway Company reserved the entire seating capacity of the New Coates' Theater on Wednesday evening where "The Runaway Girl" was on the boards. The delegates with their ladies, and the supplymen, attended in full force. Some hits, not in the lines of the play, but suited to the occasion, were enjoyed by the company. The play in itself was most entertaining.

Chief Hale, of the Kansas City Fire Department, entertained the visitors with an exhibition of the steam fire engine and apparatus, and the corps of firemen who visited the Paris Exposition with the engine. The Kansas City Fire Department has for many years been recognized as one of the leading

fire fighting organizations in the world, having an international reputation to that effect.

On Thursday, the entertainment consisted of a trip to Fort Leavenworth, Kansas. A special train left the Union Depot at 1:30, carrying about three hundred persons. About one hundred more made the trip to the Fort in the electric cars. The party was escorted by army officials through the barracks and fort, and the military prison was also inspected. In the mess-room a regulation meal was spread for one hundred of the inmates of the prison. Major McClaughey, who is at the head of the institution, explained the details of prison life and the system of identification by physical measurements.

The party then visited the National Soldiers' Home, at Leavenworth, where a fine lunch was served. This outing was the principal one of the week, and was full of interest to all.

On Friday the day was very generally given to the inspection of the exhibition of street railway supplies at the Convention Hall, and in attendance upon the vaudeville show given under the auspices of the supplymen in the afternoon.

There was also an excursion over the line of the East Side Electric Railway Company to Heim's brewery and park, at the terminus of the road, where the visitors were shown the brewery plant, including the ice making machinery. Refreshments were served.

On Friday evening the annual banquet was held at the Coates' House, at which the installation of officers took place. The banquet was a very pleasant affair in every respect, the musical features being particularly attractive.

It is not out of order to refer to such a commonplace thing as the weather, which really is one of the most important factors in insuring a successful convention. The weather during the week, while a trifle cool on one or two days, was very generally fair and pleasant, and added much to the pleasure of the various trips. The good weather with which the Association has been favored during convention week in all the years it has been in existence has been a matter of comment on many occasions.

LIST OF LOCAL COMMITTEES.

The committees in charge of the arrangements for the meeting were as follows:

ENTERTAINMENT AND BANQUET COMMITTEE.

W. H. HOLMES, Chairman,
President Metropolitan Street Railway Co.
L. E. JAMES,
Vice-President Metropolitan Street Railway Co.
D. B. HOLMES,
Counsel Metropolitan Street Railway Co.
FRANK HAGERMAN,
Counsel Metropolitan Street Railway Co.
J. K. CUBBISON,
Attorney.
FRANK WALSH,
Attorney Metropolitan Street Railway Co.
W. E. KIRKPATRICK,
Secretary and Treasurer Metropolitan Street Railway Co.
H. W. WOLCOTT,
General Manager Kansas City & Leavenworth Electric Railway Co.
A. A. LESUEUR,
Managing Editor Kansas City Times.
H. FLEMING,
Managing Editor Kansas City Journal.
A. M. HOPKINS,
Managing Editor Kansas City World.
C. A. SNIDER,
Vice-President Evans-Snider-Buel Company.
U. S. EPPERSON,
Manager Geo. Fowler Packing Co.
HUGH C. WARD,
Attorney at Law.
JAMES MCGOWAN,
Manager Barber Asphalt Paving Co.
R. L. GREGORY,
President Gregory Grocery Co.

RECEPTION AND LADIES' COMMITTEE.

C. F. HOLMES, Chairman,
General Manager Metropolitan Street Railway Co.
JOHN A. BROWN,
Manager Equitable Life Assurance Society.

Nineteenth Annual Meeting.

G. T. STOCKHAM,
 Manager Midland Hotel.
 C. F. MORSE,
 General Manager Kansas City Stock Yards Co.
 W. H. LUCAS,
 Attorney at Law.
 H. H. MEDALL,
 Manager Kansas City Car and Foundry Co.
 W. T. OSBORNE,
 Manager Electric Supply Co.
 JOHN W. SPEAS,
 Secretary and Treasurer Monarch Vinegar Works.
 F. C. PECK,
 President Stewart-Peck Sand Co.
 HENRY EVANS,
 President Evans-Smith Drug Co.
 ROBERT M. GOODLETT,
 Broker.
 S. H. VELIE,
 Treasurer John Deere Plow Co
 JAMES A. REED,
 Mayor.
 LATHROP KARNES,
 Assistant to President Kansas City Electric Light Co.
 HARRY FRIEDBERG,
 Division Superintendent Kansas City Electric Light Co.
 HUGH MCGOWAN,
 President Kansas City Gas Co.
 Mrs. C. F. Holmes. Mrs. W. E. Kirkpatrick.
 Mrs. G. T. Stockham. Mrs. A. M. Crow.
 Mrs. W. H. Holmes. Mrs. J. H. Durkee.
 Mrs. W. A. Satterlee.

EXHIBIT COMMITTEE.

W. A. SATTERLEE, Chairman,
 General Superintendent Metropolitan Street Railway Co.
 C. W. WADDELL,
 Manager Fairmount Park.
 J. P. LOOMAS,
 Manager Convention Hall.
 H. C. SCHWITZGEBEL,
 Purchasing Agent Metropolitan Street Railway Co.
 R. E. RICHARDSON,
 Chief Engineer Kansas City Electric Light Co. and Metropolitan Street
 Railway Co.

F. M. BERNARDIN,
B. & R. Electric Co.

INFORMATION BUREAU COMMITTEE.

JOHN O'KEEFE, Chairman,
Metropolitan Street Railway Co.

J. A. HARDER,
Assistant Secretary and Treasurer Metropolitan Street Railway Co.

E. R. ROYER,
B. & R. Electric Co.

J. W. MASON,
Manager Electric Supply Co.

LADIES AT THE CONVENTION.

The following named ladies were registered at the convention:

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|---|--|
| Mrs. W. B. Allen, Jersey City,
N. J. | Mrs. R. S. Deming, Chicago. |
| Mrs. A. A. Anderson, Youngs-
town, O. | Mrs. W. S. Dimmock, Council
Bluffs, Ia. |
| Mrs. Victor Angerer, Philadel-
phia. | Mrs. F. S. Donnell, Ottawa, Ill. |
| Mrs. Theodore P. Bailey, Chicago. | Mrs. F. E. Donohoe, New York. |
| Mrs. W. G. Becker, Kansas City. | Mrs. D. W. Dozier, Kansas City. |
| Miss A. Biergman, New York. | Mrs. J. H. Durkee, Kansas City. |
| Miss M. Biergman, New York. | Mrs. John Ehrhardt, Cleveland. |
| Mrs. Scott H. Blewett, St. Louis. | Mrs. E. C. Foster, Lynn, Mass. |
| Mrs. George E. Brett, Philadel-
phia. | Mrs. W. R. Garton, Chicago. |
| Mrs. Edward Butts, Kansas City. | Mrs. Robert S. Goff, Fall River,
Mass. |
| Mrs. T. J. Callinan, Chicago. | Mrs. John R. Graham, Quincy,
Mass. |
| Mrs. E. R. Carrington, London,
Ont. | Mrs. H. M. Grier, New York. |
| Mrs. J. W. Carter, Kansas City. | Mrs. Charles Grover, Kansas City. |
| Mrs. Charles S. Clark, Philadel-
phia. | Mrs. A. L. Haasis, Jersey City,
N. J. |
| Mrs. James Connolly, St. Louis. | Miss Alice Hammer, Hutchinson,
Kan. |
| Mrs. W. E. Cooke, Chicago. | Mrs. W. H. Harris, Cincinnati. |
| Mrs. Henry D. Cooke, New York. | Mrs. John M. High, New York. |
| Mrs. W. H. Cord, Chicago. | Mrs. A. A. Hilton, St. Louis. |
| Mrs. W. P. Cospier, Chicago. | Mrs. J. B. Hogarth, Denver, Col. |
| Mrs. A. M. Crow, Kansas City. | Mrs. C. F. Holmes, Kansas City. |
| Mrs. Henry J. Davies, Cleveland. | Mrs. W. H. Holmes, Kansas City. |
| | Miss Holst, Memphis, Tenn. |

- Mrs. L. E. James, Kansas City.
Mrs. W. L. Jenks, Port Huron,
Mich.
Mrs. S. M. Johnson, Schenectady,
N. Y.
Mrs. Frank G. Jones, Memphis.
Mrs. James M. Jones, Indianapo-
lis, Ind.
Mrs. F. W. Kinmouth, Sandy Hill,
N. Y.
Mrs. W. E. Kirkpatrick, Kansas
City.
Miss L. R. Klott, Jersey City,
N. J.
Mrs. R. T. Lane, Cleveland.
Mrs. W. G. McDole, Cleveland.
Miss McLean, Memphis.
Mrs. J. G. McMichael, Chicago.
Mrs. Ira A. McCormack, Cleve-
land.
Mrs. H. F. MacGregor, Houston,
Tex.
Mrs. Peter D. Milloy, Jersey City,
N. J.
Mrs. Frank K. Mills, Cincinnati.
Mrs. R. E. Mills, Bridgeport,
Conn.
Mrs. S. J. Minton, Schenectady,
N. Y.
Mrs. Elmer P. Morris, New York.
Mrs. F. H. Newcomb, Brooklyn,
N. Y.
Mrs. J. G. Nitchy, Kansas City.
Mrs. Albert M. Patten, Topeka,
Kan.
Mrs. James Partridge, Sandusky,
Ohio.
Mrs. R. J. Redicke, St. Louis.
Mrs. F. L. Roach, Chicago.
Mrs. John M. Roach, Chicago.
Mrs. John C. Robinson, Philadel-
phia.
Mrs. H. A. Russell, Schenectady,
N. Y.
Mrs. W. A. Satterlee, Kansas
City.
Mrs. H. C. Schwitzgebel, Kansas
City.
Mrs. J. M. Smith, Toronto, Can.
Mrs. E. J. Spencer, Venice, Ill.
Mrs. G. T. Stockham, Kansas
City.
Mrs. A. H. Stone, Worcester,
Mass.
Mrs. H. L. Thompson, St. Louis.
Mrs. W. F. Waller, Sedalia, Mo.
Mrs. James F. Wattles, Merrimac,
Mass.
Mrs. D. F. Webster, Sedalia, Mo.
Mrs. W. J. White, Cleveland.
Mrs. G. Van Ginkle, Dallas, Tex.
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Banquet of the
**American Street
Railway Association**

October 19, 1900
The New Coates House
Kansas City, Mo.



Nineteenth Annual Banquet

American
Street Railway Association

Friday, October 19th, 1900

The Coates Hotel

Kansas City

Menu.

CANAPE CAVIAR.

ROCKAWAYS, DEEP SHELL.

AMONTILLADO. CLEAR GREEN TURTLE, AUX QUENELLES.
PIM OLAS. CELERY. SALTED ALMONDS.

HAUTE SAUTERNE. FILET OF SOLE, FRANCAISE.
CUCUMBERS. POTATOES, WINDSOR.

PONTET CANET. SWEETBREADS LARDED—MUSHROOMS.
FRENCH PEAS.

CIGARETTES. Metropolitan Punch.

VEUVE CLUQUOT. ROAST OREGON QUAIL, CELERY DRESSING.
CURRANT JELLY.

CHILLED TOMATOES, MAYONNAISE.

TUTTI FRUTTI ICE CREAM.
CAKES ASSORTED.

ROQUEFORT CHEESE. TOASTED WAFERS.

FRUITS.

COGNAC. CAFE NOIR.
CIGARS.

Toasts.

TOASTMASTER, MR. D. B. HOLMES.

W. S. GILBERT,	-	-	-	-	"LOOKING BACKWARD."
EDWIN S. McANANY,	-	-	-	-	"THE TRIAL LAWYER."
J. H. STEDMAN,	-	-	-	-	"OUR GUESTS."
FRANK P. WALSH,	-	-	-	-	"A SUDDEN JERK—OR, WHO PULLED THE BELL CORD?"
CHESTER SNIDER,	-	-	-	-	"THE STATESMAN."

INSTALLATION OF OFFICERS.



BANQUET.

The Kansas City banquet was a very enjoyable occasion. While, unfortunately, two of the gentlemen who were to have responded to toasts, were not present, their places were acceptably filled by gentlemen who at short notice responded to the toasts. What the occasion may have lacked in speechmaking was fully made up by the highly entertaining character of the musical portion of the programme. There was an excellent orchestra and the "Megaphone Minstrels," a local organization, sixty strong, composed of the leading business men of the city, sang many favorite selections during the evening. In addition, there were glees by quartettes and sextettes composed of members of the minstrels.

The dining-hall was elaborately decorated and the menu was very good. A novel feature of the occasion was a full size reproduction of the front end of a street car, including a full size platform, with controller, brake, gong, etc. The car was located just back of the speaker's table, which latter ran across the room, there being six tables running lengthwise of the room. Speaking for the evening was begun by the vice-president giving two taps of the bell and making the introductory announcement from the platform of the car.

REMARKS OF VICE-PRESIDENT RIGG.

Mr. John A. Rigg—Ladies and Gentlemen: At five o'clock this afternoon I was appointed conductor of this car by President Roach. He was called home upon a very important business matter. Before leaving, he requested me to appoint a new conductor; and the name of the gentleman recommended is Mr. Daniel B. Holmes, general counsel of the Metropolitan Street Railway Company, of Kansas City. [Cries of "He's all right."]

I consulted the President of the company, Mr. Walton H. Holmes, about the appointment of Mr. Daniel B. Holmes, and he requested me to state that Mr. Holmes would have to resign as counsel of the company—that he could not fill two positions.

Mr. Daniel B. Holmes is present, and I ask him to take charge of the car—"Kansas City, 1900." [Applause.]

REMARKS OF THE TOASTMASTER.

Mr. Holmes—Ladies and Gentlemen: You may well appreciate my embarrassment at being called upon to conduct these exercises to their conclusion, under the circumstances which have been mentioned by the gentleman who has just preceded me. I was about to say that no one could regret more than I the absence of the distinguished retiring President of this Association, but upon reflection I am convinced that before we are through with the exercises my auditors will regret it more than I do.

Before we proceed with the programme of toasts, I desire to say, in behalf of Kansas City, that all of its inhabitants feel highly honored by the distinguished Association which has assembled in its midst, and which is this evening concluding its deliberations. While we feel honored in that respect, we feel still more honored in the fact that one of our fellow citizens has been selected to preside over your Association during the ensuing year. [Great applause.] The honor is richly deserved by my friend and has been most worthily bestowed. Surely no higher compliment could have been paid to our city, and surely none could be more appreciated than it will be by all of us. [Applause.]

You have heard the praises of Kansas City by our distinguished mayor in welcoming you in our midst, and I will not undertake to repeat any of the good things which he said. I think you are ready to hear the words of wit and wisdom which are ready to be laid before you at this time, and that you would much prefer to listen to the speakers who are to respond to the toasts than to any extended remarks from me.

TOAST—"LOOKING BACKWARD." RESPONDED TO BY
MR. W. S. GILBERT.

Toastmaster Holmes—We will not, under circumstances which it is not necessary for me to explain, adhere very strictly

to the programme as laid down, so that the first toast to be responded to this evening is that of "Looking Backward." It is not always a pleasant thing for most men to look backward. Many of us have regrets and reminiscences which are not altogether pleasant, and to have our past brought before us is not an agreeable thing under all circumstances; but I have to say, ladies and gentlemen, that we have with us this evening a man who, if within the power of anybody, can, indeed, make it pleasant for us to look backward. I have the pleasure of introducing to you a gentleman of Kansas City, whose wit and humor and good fellowship are admired by all, and who will now address you on the toast "Looking Backward." I have the honor of introducing Mr. W. S. Gilbert, of Kansas City. [Applause.]

Mr. Gilbert—Mr. Toastmaster, Ladies and Gentlemen: It would be intensely interesting to know many things about the daily life of our ancestors which the stately muse of history has failed to chronicle.

You who are assembled here to-night would like to know, I am sure, how Mr. Suburban in the days of ancient Rome got home to his Sabine Villa after his busy day at the Forum, cornering the stock market; or after spending a refined evening, in the society of the Christian martyrs at the Coliseum. You would also like to know, perhaps, whether they ran owl cars on the night of the Saturnalia; and whether the street car companies pursued a liberal policy in the matter of transfers; and whether the passengers were as duly grateful to the street car managers for the right to stand up and other privileges, as we of the present day? [Laughter and applause.]

Did the etiquette of those days compel an immortal Roman to gather up his parcels and the tails of his toga and to surrender his seat to the first good looking vestal who crowded into the car after all the seats were taken, confiding in her charms and presuming on her sex?

And when did it occur to anybody that there might be co-operation in the matter of getting home o' nights on some sort of a joint plan? Does that old, golden-haired chestnut, about the two drunken men seeing each other home, contain the first protoplasmic germ and example of co-operation in home going? [Laughter and applause.]

Faithfully did I turn the pages of history searching for answers to these queries. But alas! To use the slang of the poker table "Nothing lower than kings could open that jack pot."

I take it that the muse of history was of the feminine gender—not solely from her uncommunicativeness—but from her tendency to

magnify the importance of kings and their courts and to exclude from her ample page economic facts not born in the purple. [Laughter and applause.]

But though no direct mention is made in the old chronicles of the then existing transportation facilities, one gathers from what one reads (between the lines, as it were), that the great popular scenic route of travel, the picturesque Baltimore and Ohio of the days of the Cæsars, led from this world to Hades. Transportation over this line was secured by submitting to a spear thrust, or to a tap on the head by a battle ax. A through ticket thus obtained was good only to the river Styx. At this rate basing point, a Tammanyite named Charon had established a ferry, and obtained from Mayor Pluto and the City Council of Hades an exclusive franchise, and paradoxically, as it may seem, refused to "dead head" any one; and even members of the City Council had to cough up an obolus or swim.

An obolus was four and one-half cents of our money—this is instructive to the statistician, as it shows that car fare has advanced under a Republican administration. [Applause.]

If Charon had really been an up-to-date statesman and business man, he would have more thoroughly worked his "sphere of influence and dock privileges" in the lower world and added an ice trust to his ferry plant. The demand for ice in that locality must have been constant and enthusiastic. [Applause.]

Perhaps the least abrupt way to leave the ancient world and to come down to date is to take a stage coach; the transition between no transportation and transportation by stage coach is so imperceptible that no shock can be experienced. But this reflection is caused by looking backward. For, according to De Quincey, "stage coaches first revealed the glory of motion, suggesting at the same time, an under-sense not unpleasurable, of possible but indefinite danger," which reminds one of Sam Weller's description of a ride in a hackney cab as "two miles o' danger at eight-pence."

Even as late as 1750 the journey from London to Birmingham by stage coach, a distance of one hundred and sixteen miles, occupied nearly three days and nights.

To an American, who, as Frederic Harrison says, "Makes everything by machinery, except beauty and happiness," and who is always in a chronic hurry to get somewhere, this does not suggest very vividly the "glory of motion," but what one of us does not occasionally sigh for that leisurely epoch of the stage coach and the roadside inn, with its smiling landlord and blazing hearth. How good that "pint o' bitter" must have tasted after a long ride in the cold crisp air, and what fine talk and sociability must have beguiled the hours before bedtime! [Great applause.]

But now in the new system of travel, to quote De Quincey once

more, "Iron tubes and boilers have disconnected man's heart from the ministers of his locomotion," and instead of the neighing of gallant steeds, we have the "pot walloping of the boiler" and the angry buzz of the trolley.

It is vain and useless, however, to envy our ancestors' leisurely mode of sauntering through life; ours is the strenuous era. The pulse of humanity has been quickened by the inventions which have yoked the elements to the lumbering old stage coach. And whether we like it or not, we must "step lively" if we are to get aboard. If we "want off," to use the expressive English of the Westport car line, it is easy to push the button. Our fellow passengers will spare us with a good grace, especially the expectant heir to our seat. [Great applause.]

TOAST—"THE TRIAL LAWYER." RESPONDED TO BY MR.
EDWIN S. McANANY.

After selections rendered by the Megaphone Minstrels, the toastmaster resumed as follows:

Toastmaster Holmes—Ladies and Gentlemen: The next toast upon the programme is that of "The Trial Lawyer." It was to have been responded to by a distinguished citizen of Kansas City, in the person of Mr. Frank Hagerman. [Applause.] I am sorry to say that Mr. Hagerman has been called away from the city so that he is unable to respond here this evening; but we have lying upon our borders a sister state where prohibition prevails, and whenever there is anything to be had in the way of something good to drink it always has a representative on hand; I am very happy to say that one of its citizens is here to-night who will very worthily fill the place of Mr. Hagerman. I take pleasure in introducing to you Judge McAnany, of Kansas City, Kansas, who will respond to that toast.

Mr. McAnany—Mr. Toastmaster, Ladies and Gentlemen: Permit me, Mr. Toastmaster, to remain where I am, instead of going to the speakers' table. I am simply a soldier in the rear ranks and I might be embarrassed by such a sudden rise to distinction.

From the introduction of the toastmaster you are aware of the fact that I am from Kansas. When I came here this evening and was informed that I was to take the place of that distinguished lawyer, Mr. Hagerman, I felt, on gazing at the three figures which adorn the last page of the toast card, and represent what we might call the "finis"

of this occasion, thankful to Mr. Holmes that we have "owl" cars running to Wyandotte. [Laughter and applause.] I feel that, were I to remain here very long an owl car would not serve the purpose, but at least one humble citizen of Kansas would be taken home this evening in a hack. [Laughter.] Shakespeare says that there are seven ages in the life of man; and in responding to my toast, I will divide the life of the trial lawyer into four. Further, by way of introduction, let me say that in discussing this subject I believe it useless to refer to the sorrows and vicissitudes that beset the pathway of the trial lawyer, for we know the truth of the poet's words—

Laugh, and the world laughs with you;

Weep, and you weep alone.

So let us not depict those sombre and solemn moments that come to even the trial lawyer as well as the rest of humanity, but rather exemplify the periods of his life by some of the pleasing incidents that break the monotony of his career.

You know, in starting out on a legal career, youthful hopes are often blasted and prospects of good fees barred, by pleas to jurisdiction. To-night, when I left my home and crossed the persimmon-lined banks of the Kaw, I felt that in setting foot on Missouri soil, I was out of my jurisdiction, and would, of course, enjoy the hospitality of this board in dignified silence. However, it has turned out otherwise.

The question of jurisdiction reminds me of a story I heard some years ago about a distinguished justice of the peace who had his sanctum on the hallowed line between the States of Kansas and Missouri near that classic region known as Rosedale. Our friend, the justice, was impressed with an exalted opinion of his dignified position, and was bound to maintain it at all hazards. He had a friend named Jim Weller, not Sam Weller, but Jim, who frequently manifested symptoms of belligerency such as seem to characterize the actions of the Powers in China at the present time. One day as this judicial luminary was strolling through the corn fields that surround this city, he met Jim talking and gesticulating with a neighbor in such a way as to indicate that a clash at arms was imminent. Before he came up to them his predictions were fulfilled. Remembering his duties as a conservator of the peace, he climbed upon a rail fence so as to be safe from harm's way, and amidst the fighting and accompanying volley of words, more or less instructive, he said, "In the name of the great State of Kansas, I command you to observe the peace." This did not stop the combatants, and just as he uttered the words the rail broke and our friend was precipitated into the State of Missouri. Turning to Jim he said, "Gim him hates, Jim, I am out of my jurisdiction." [Laughter and applause.]

After passing this first period which every one of us meets in our incipient career, we come into the full-fledged justice's court to prac-

tice. And here let me illustrate the life of the trial lawyer and his brief time in the public eye as a justice's court practitioner by telling a little incident that occurred in early days to one of the brilliant attorneys of our city who will address you this evening. In the budding days of youth he was called upon to defend a solemn member of the Salvation Army, arrested for disturbing the peace. Our friend, youthful at that time, but now old and dignified, went down to the justice's court prepared to defend his client. While waiting until the court convened, he was passing the time with his brother attorneys in swapping stories. While he was deeply engaged in conversation, the justice of the peace came in, assumed the wool sack and said to the prisoner, "Rise, Mr. Brown. Whom have you to defend you against this charge?" The Salvation Army man, lifting his eyes heavenward, said, "The Lord Almighty will defend me." Our friend, hearing the word "defend" and remembering his business there, arose hurriedly and said, "Yes, your honor, I am ready to appear in behalf of the defendant." And I regret to say, ladies and gentlemen, that a Kansas City justice and a Kansas City jury, in spite of so distinguished an advocate, found the prisoner guilty. [Laughter.]

Having passed through his career as a justice's court practitioner, beset as it is with trials and tribulations, we find the aspiring lawyer as a member of the *nisi prius* bar, or an advocate in the circuit or district courts. Here, in spite of added years and dignity, we see his serenity marred and even the tenor of his life broken, by scenes and occurrences that provoke mirth and cheer some weary wanderer in his pathway through life. I recall an incident that occurred in the practice of a distinguished trial lawyer, who for many years had gained fame, as well as added to his worldly wealth, by defending a class of cases known as "personal damage" suits. I presume you gentlemen are more or less familiar with these cases. [Applause.] Webb was the name of the lawyer, and as he grew in years he became more and more dignified, until, I might say, he rivalled our Rosedale justice. You know that sometimes in the trial of a personal injury suit you will meet with a witness for the plaintiff who has the most thorough and peculiar knowledge of the case, and can with beautiful effect cover all the points necessary to escape a demurrer to the evidence. [Laughter.] On this particular occasion a swarthy son of Ham happened to be the star witness, and his testimony filled the swelling bosom of the plaintiff's attorney with great joy. When his examination had been completed the witness was turned over to the tender mercies of the representative of the iron-wheeled corporation. Mr. Webb represented the octopus on this occasion [laughter]; and he had not asked more than one or two questions when our colored brother fixed his eyes on the blue sky and the waving corn fields afar off, and did not care to look at anything else. While answering the questions in a perfunctory way he seemed

to admire only the beauties of nature and the azure vault of heaven rather than to pay attention to the counsel's questions or the countenances of the jury. The attorney for the defendant noticed this, and intending to take advantage of it, said to him with towering mein, "Now, sir, I want you to look straight at me and answer this question." "I object," said the attorney for the plaintiff, and the Court said, "The counsel for the plaintiff will state the grounds of his objection." "If your honor please," said the attorney for the plaintiff, "it is contrary to law and it is inhuman to torture a witness." [Laughter.] When court adjourned at noon, the refreshments were on Mr. Webb.

When the trial lawyer has passed the initiatory and intermediate periods he usually soars into higher fields; and sometimes the advocate while still young in years will make his way into that sanctum sanctorum, the Supreme Court of the United States. Permit me here, with a feeling of pardonable State pride, to recall an incident that occurred to Justice Brewer of the Supreme Court of the United States, which did not at that time redound to the dignity of the court, nor leave undisturbed the peace of mind of that distinguished justice. The court was sitting *en banc*, to use a legal expression, and a youthful attorney was arguing his first case before it. He was declaiming at the rate of about one hundred and fifty to two hundred words a minute upon one of the simplest propositions of law, when Justice Brewer interrupted him and in a rather sarcastic way said, "I trust the learned counsel will give the Court credit for knowing some of the rudimentary principles of law," and, unabashed, this youthful advocate replied, "I made that mistake in the lower court and do not intend to make it here." [Laughter and applause.]

After having passed through these four stages the lawyer often is called to other and more honored fields. He leaves his pleadings and briefs, ceases to appear as the advocate before that palladium of our institutions, the jury, and ascends to the seat of Justice; and now, speaking seriously in closing my resumé of his career, I wish to say that the trial lawyer in his life exemplifies in America the citizen militant. He it is who unmasks fraud, vindicates and lifts up the innocent, and stands as the ever ready champion of the injured and oppressed. In the annals of the bar can be traced the history and progress of individual liberty, and we can look back with commendable pride to the part the lawyer has taken in strengthening and upbuilding our institutions and making America what it is to-day. [Applause.] We look to the whole people as the depository of liberty. To preserve and perfect it, to elevate humanity, the people must have leaders, and these have frequently arisen from the profession of the law.

As we pass from the realm of the trial lawyer to the dignified position of the bench, we can trace with feelings of gratitude what the judiciary has contributed to our country's fame and greatness; and we

can look to a future radiant with hope and promise so long as the people respect and preserve the purity of our courts.

Now in conclusion, and digressing from the subject that has been assigned to me, I wish to say a word of welcome on behalf of the State of Kansas and of its metropolis beyond the Kaw. We of the two Kansas Cities are united in a common cause and hope to gain a common object. [Applause.] We of Kansas look with feelings of pride upon the progress of Kansas City, Missouri, because in spite of all that may be said, we claim it and it truly is a child of Kansas. And while we defer to the material wealth and greatness of grand old Missouri, at the same time let us pause to bespeak a pæan of praise for the imperial State of Kansas. Kansas has had her trials and her vicissitudes, but her people have ever been strong and cheerful in adversity, and now we are filled with thankfulness in these prosperous days of plenty.

I would feel that my part were illy done should I fail, in addressing you this evening, to bid you a hearty and whole-souled welcome on behalf of Kansas. My only regret is that we are compelled to see you go so soon. While you remain, the metropolis of Kansas is yours, and as you go we bid you, regretfully, a heartfelt farewell. [Applause.]

TOAST—"OUR GUESTS." RESPONDED TO BY MR. J. H. STEDMAN.

Toastmaster Holmes—Ladies and Gentlemen: I wish to say, after listening to Mr. McNany's address, that I am sure you will agree with me that his plea to the jurisdiction must be overruled. Certainly state lines do not confine the genius which dwells in the vicinity of Kansas City. I also desire to say that before Mr. Roach, the retiring President, left Kansas City, he sent word to the toastmaster that if there should be any vacancy in the list of toasts it ought to be filled by a gentleman representing the Association who had never made a speech before. He remarked that nearly all of the members had made so many speeches at the annual banquets throughout the country that the Association had gotten tired of listening to its own members generally, but that there was one man present upon this occasion who had never made a speech at any of these banquets or anywhere else, and he asked that he be called upon. I take pleasure, therefore, in asking that gentleman to respond to the toast "Our Guests," which was to have been responded

to by Mr. Gardiner Lathrop. He is well known to the members of this Association. I refer to Colonel J. H. Stedman, of Rochester, N. Y.

Mr. Stedman—Mr. Toastmaster, Ladies and Gentlemen: After the introduction you have heard, you can appreciate that, unaccustomed as I am to public speaking, I will do my level best. Mr. Roach, with whom I had some conversation and whose absence we much regret, asked me if I would be kind enough to make a few remarks on the subject of "After Dinner Talk." To-day Mr. Holmes asked me, with an apology for so doing, if I would fill the gap caused by the absence of the speaker who was to have responded to the toast, "Our Guests." I said to Mr. Holmes that his apology suggested to me the incident of the Irishman chased by a bull over a plowed field, and the Irishman took the rail fence just in time to escape the mad beast. The bull stood on the other side of the fence shaking his head and pawing the ground and the Irishman said, "Yez may scrape and bow and apologize, but damn yez, I think ye meant it." [Applause.] That is the condition I find myself in this evening in reference to Mr. Holmes.

I am not prepared to make any extended remarks in reference to this toast of "Our Guests," but I may say that the brief time allotted to me would be entirely insufficient to do justice to the unbounded hospitality of Kansas City and its Holmes, sweet Holmes. [Applause.] The press has given us unlimited space and has paid us most delicate personal attentions. The Country Club, that beautiful place, has been open to ourselves and our ladies; steam, electric, grip, cable and private cars have glided at our will; tally-hos and hacks have been ever at our beck and call, and even the wonderful fire department of Kansas City has turned out for our pleasure every time we desired it. The Kansas City Club, too—I never knew such before, I never knew it to occur in any city club—has been kind enough to admit to its privileges any man who wore a badge or could press a button. Such unbounded hospitality is very rare, and I am sure it meets our most grateful appreciation. Then, too, that charming group of ladies on the local committee who have provided for our visiting ladies with such continuous delights have won our heartiest gratitude; and for our ladies, and for the street railway men and for the supply men, I thank the Committee on Entertainment of Kansas City, for their hospitality, and I assure you that the Kansas City Convention of 1900 will be long and gratefully remembered. [Applause.]

I shall have very little to say on "After Dinner Talk," because the hour is getting late. Of course, the most favorable thing for an after dinner speaker is to secure an atmosphere. Sometimes the atmosphere is ready made, the toastmaster floats it; then one must keep it volatile and pass it on. The occasion suggests a situation, and you grasp it

and your success is made for the evening. You remember the toastmaster who said, "It gives me great pleasure to introduce Mr. Tompkins, of Kansas City, the place where the pen is mightier than the sword, but it is the pig pen." Mr. Tompkins, arising, said, "Yes, I am from Kansas City where the pen is mightier than the sword, and it is the pig pen; but it may have escaped your notice that behind the humorous visage of your toastmaster is concealed the weapon with which Samson slew ten thousand Philistines."

Those of you who were present at the Niagara Falls banquet will remember the very happy atmosphere starter secured by Mr. Smith P. Galt, who being introduced as the attorney of a railway syndicate—and by the way I heard a new definition of a syndicate—"A body of men entirely surrounded by 'water'"—the toastmaster having referred to Mr. Galt as having come from St. Louis, Mo., Mr. Galt said: "Ladies and gentlemen: My introduction reminds me of a man who started out from our State prospecting, with a complete equipment. Six months after, a stranger met a Pike county miner traveling eastward, ragged and dirty, with one thin mule and a ramshackle wagon. The stranger said, 'Whereabouts are you from?' and the miner, slowly drawing his 'thirty-two' from his hip pocket, replied, 'Stranger, I am from Missouri, but, damn yer, don't yer laugh.'" [Laughter.] I am advised that I do not pronounce the name of Missouri correctly, but then I do not live here. [Laughter.]

The subject of legislation, as suggested by the gentleman from across the border reminded me of an occurrence in New Jersey. An Irishman, a member of the Board of Aldermen, arose and said, "Mr. Chairman, I move yo sor, that on account of our having the control of the street railways in the matter of franchises and things of that kind, this board passes a motion that the fare on the suburban road shall be reduced from ten cents to five cents." The discussion went on and another member arose and said, "If you will excuse me, I would like to take exception to that motion, because I think it an infringement of the rights of the workin' man. I do not think we should reduce the suburban fares from ten cents to five cents, as it would be an infringement of the rights of the workin' man, because then the workin' man could only save five cints by walking." [Laughter.]

Stories are happiest as an illustration, and often go, even if the thing to be illustrated is lugged in. Our commissioner of charities and corrections always tell this tale at dinner. A harmless lunatic on the asylum grounds is pushing a wheelbarrow upside down. A visitor says to the inmate of the asylum, cheerfully—"Say, my good man, you want to turn that wheelbarrow the other side up." "Ugh," says the lunatic, "I did that yesterday and they put bricks in it."

Mr. Stedman then entertained the company with further

humorous anecdotes and concluded his remarks with the following:

EULOGY ON KENTUCKY.

Man born in the mountains of Kentucky is of feud days and full of virus. He fisheth, fiddleth, cusseth and fighteth all the days of his miserable life.

He shunneth water as a maddog and drinketh much mean whisky. When he desireth to raise h—l he planteth a neighbor and lo, he repenteth twentyfold.

He riseth even from the cradle to seek the scalp of his grandsire's enemy, and bringeth home in his carcass the ammunition of his neighbor's wife's cousin's father-in-law, who avengeth the deed.

Yea, verily, his life is uncertain and he knoweth not the hour that he may be jerked hence.

He goeth forth on a journey half shot and cometh back on a shutter shot.

He riseth in the night to let the cat out and it taketh nine doctors to pick the buckshot out of him.

He goeth forth in the morning in joy and gladness and cometh back in scraps and fragments.

A cyclone bloweth him into the bosom of his neighbor's wife, and his neighbor's wife's husband bloweth him into the bosom of Abraham before he hath time to explain.

He emptieth a demijohn into himself and a shotgun into his enemy, and his enemy's son lieth in wait for him on election day and lo! the coroner ploweth up a forty acre lot to bury the remains of that man.

Woe, woe is Kentucky! for her eyes are red with bad whisky and her soil is stained with the blood of innocent moonshiners.

TOAST—"A SUDDEN JERK; OR, WHO PULLED THE BELL CORD?" RESPONDED TO BY MR. FRANK P. WALSH.

Toastmaster Holmes—Ladies and Gentlemen: I was very much imposed upon by the retiring President of this Association in the kind of send-off he gave Colonel Stedman. My advance apology for the Colonel was altogether unnecessary. He has now made his debut as an after-dinner speaker with such marked success that I am quite sure he will be in universal request hereafter.

The next toast on the programme deals with a question which more than any other agitates the street car manager.

It is entitled "A Sudden Jerk, or Who Pulled the Bell Cord?" These things are more costly to street car management than almost any other one item connected with the operation of the cars. A gentleman has been selected to respond to this toast who has had a very large experience, especially for his years, in undertaking to solve that momentous problem favorably to the company, and I assure my auditors it is a very difficult task. I believe, however, he will be more likely to solve it to your satisfaction this evening than he ordinarily is to the satisfaction of a common law jury. I take pleasure in introducing Mr. Frank P. Walsh, of Kansas City. [Applause.]

Mr. Walsh—Toastmaster, Ladies and Gentlemen: It is indeed gratifying to me that our worthy toastmaster spoke of my tender years in introducing me, or some of you might have been misled into thinking that I was the lawyer my friend who preceded me spoke of, and who is not now of tender years. His anecdote referred to the time when this lawyer was in his budding young manhood, and it is, therefore, a sort of solace to me for the toastmaster to announce to this distinguished audience that I am still a bud. [Laughter.]

The thought occurred to me, when my friend Gilbert was making his very scholarly address, that the Lord certainly "moves in a mysterious way His wonders to perform," for if I just had Billy Gilbert's ideas with my voice, or if he had my voice with his ideas, this audience would have been treated to one of the finest speeches ever uttered on the face of the earth. [Applause.]

I wish at the outset to say to the gentlemen present, so as to reassure them, first, that the city ordinances of Kansas City respecting intoxication are suspended during the meeting of the street railway association, and I wish to add further that this stifling sense of dignity is not becoming to the gentlemen present, and if they do not give my speech the strict attention which perhaps I think it deserves, I will excuse them for it. In fact, I challenge noisy competition, ladies and gentlemen, for little as you may believe it when I get through talking, this is the way I make my living. I am not like the distinguished damage suit lawyer in Minneapolis who stated to a brother of his who came from Chicago and asked him how the law business was in Minneapolis; he replied, "Rotten, rotten, too much competition; I have often thought lately that if I was a young man I would take my witnesses and move to Chicago." [Laughter.]

I have an apology also to make to the ladies who so gracefully adorn this brilliant occasion for making a few remarks for Mr. Lathrop, who was to have been present with us this evening. He is

the gentleman who is always selected in Kansas City to respond to the toast "Our Guests," when there are ladies present. Unfortunately, he is unavoidably absent this evening. I would like to attempt that pleasant duty myself, were it not for the fact I have in mind the case of a young man of tender years, like myself, who had his first banquet speech to make and was assigned to respond to the toast of "The Ladies." He thought he would begin it with a beautiful verse, so he said,

Oh, woman, in thy hour of ease

Uncertain, coy and hard to please,

and then his verses became a little mixed, and he got confused and hesitated for a long time and in trying to catch the next couplet got the wrong one and continued.

But seen too oft, familiar with thy face,

We first despise, then pity, then embrace.

[Laughter.] They say that he made the hit of the evening, but he was not called upon to respond to that particular toast any more.

The subject which is assigned to me is certainly a startling one and an interesting one to street railway men—"The Sudden Jerk, or Who Pulled the Bell Rope?" Some grave and reverend old judge who sat upon the bench of some court of last resort a short time after the reign of the great law giver of the Hebrews, uttered the startling phrase that the sudden starting of a street car was negligence per se, and since that day that sudden jerk has been the legal "jimmy" which has opened the safes of the street car corporations of the United States and distributed their coin among the common people of the country. [Applause.]

I have a sort of double barreled toast. It seems to me that the clever gentleman that assigned it put it in two sections purposely—first the matter of the sudden jerk and then the question "Who pulled the bell cord," as though I was to answer the latter query. The solution of that query has staggered the courts in every state of the Union, baffled the wisdom of supreme court judges and caused common law juries to take thousands and thousands of dollars out of the coffers of the railroad companies. The sudden jerk itself is a living reality, a condition, and not a theory. But if I were asked to answer the question as to what caused the sudden jerk, I would have to decline it, confess my inability, and pass it up with those other momentous questions which have come thundering down the corridors of time from the earliest ages of antiquity—"Who killed the cock robin?"—"Who wrote 'Beautiful Snow?'"—"Who struck Billy Patterson?"—and "Where did Mr. Croker get it?" The thought has often occurred to me that may be it is all a myth—that perhaps such a thing never occurred at all, and I trust this audience will excuse me if I indulge in a little personal experience on that score.

There was a leading citizen of this community at one time who uttered a great political truism which is, "If you can not beat, then join them." I followed his advice and a few years ago joined the ranks of those downtrodden lawyers of the country who try to explain to common law juries what caused the "sudden jerk." I have since learned that the sudden jerk is oftentimes a myth; and a notable instance occurred in this city some time ago. There was a good old gentleman in a Kansas town who was an ardent prohibitionist—he was also a leader in the church, and they say he uttered the most soulful prayers when at home. When he came to the city, which was rarely, he went out to see the sights. They say that one night when he was in a bar-room on Main street he forgot his dignity for a moment and engaged in a friendly wrestling match with the porter of the saloon, in which he broke his arm. They took him home, and when his wife came to ask him the cause of the accident he told a plain, unvarnished story. He said he was getting on a car at Ninth and Main streets, and just as he was boarding the car it started with a sudden jerk and he was thrown down and his arm was broken. He received much sympathy from his family. He had a brother in the little town himself who was one of these wise fellows. He immediately consulted a damage suit lawyer and gave him the alleged facts in the case. The lawyer said he would investigate the case and asked the brother to return in a week. The brother returned at the time indicated and the lawyer said, "You had better sue the railroad company, you have a good case." The brother went back and said, "John, my lawyer says you should sue the company, that you have a good case." He answered, "No, let it go; I do not want to make any trouble about the matter." The brother did not want to let a chance of that kind go by, and went back to the damage lawyer again and asked him for his advice. The lawyer said, "I have investigated this case thoroughly. I have no doubt that your brother will get a verdict for the injuries he received, for I have eleven of the most reputable citizens in Kansas City who saw the car start with a sudden jerk, throw your brother down and break his arm." [Laughter.] I believe my friends that that is very often, if not always, the origin of the sudden jerk in street railway cases.

I believe with the sudden jerk left out you would be a great deal more successful in managing the street railway lines of this country and might succeed in retaining a small amount of your earnings for the stockholders. I heard a short time ago of a distinguished man who was appointed general counsel for a railway company. During the course of his incumbency in that office, the company in some way fell into hard times. At the end of five years it was his duty to go East on some business and he met one of the stockholders, and in talking over the affairs of the company the stockholder said,—“Well,

George, there is one thing you have demonstrated during your incumbency of that office, and that is that you are a friend of the poor man." "Is that so, why?" "When you came to the company our stock was selling for \$1.75, and to-day after five years of service it is within the reach of the humblest of our citizens." [Applause.]

I recall a case that occurred some time ago in which the question involved was the negligence of a motorman in running into a broken down wagon that was on the street car track. It is a case familiar to our toastmaster here. I recite this instance to show some of the difficulties under which we labor in this class of cases. The charge against the company was that the gripman was negligently talking to a policeman standing on the running board and not paying attention to his business, and because of this he ran into a broken down wagon and broke the limb of a passenger. Our defense went along swimmingly—we put on witness after witness who denied the alleged facts. The motorman said he had spoken a few words to the policeman but it was a mile away from the scene of the accident on perfectly level ground, and that in going down this particular hill he was paying close attention to his duties, but that the night was so dark he did not see the wagon until it was too late to stop. The other witnesses corroborated the motorman, and then we got to the policeman,—he made a good witness, and said he had spoken a few words to the motorman, but it was on level ground and was a mile away from the place. That is, this was his testimony on the direct examination. The attorney on the other side took him for cross examination: "Now, Michael, you say you did have a few words with this motorman?" "Yes." "What were the words you had; repeat the conversation?" "I could not say at this late day exactly what it was." "Come, now, try to remember what he said." "Oh, yes," said Michael finally, "he said to me 'this is a bad night for a policeman to be out.' I said it was a bad night for a motorman, and then I said, 'Wouldn't there be the devil to pay if the car broke loose on this hill.' " We appealed the case but the judgment was affirmed.

In another case I recall our distinguished toastmaster was leading counsel and everything had progressed finely. The question at issue was whether a lady stepped off a cable car backward before it stopped, or whether it stopped and when she was getting off it started with a sudden jerk, which threw the lady down. The defense was strong. The last witness was a reputable business man. He went on the stand before the attorney had time to speak to him; up to this time the evidence of the company was almost conclusive that the lady stepped off the car before it stopped. The man went on the stand hurriedly before his memory had been refreshed, and he attempted to detail the circumstances. Mr. Holmes asked him to go ahead and tell the jury all the facts in the case. He said, as the car was pulling

up to Woodland avenue he noticed this lady sitting in front of him, and that when the car got to Woodland avenue it stopped and she stepped down on the footboard and stepped on the ground and the car went on. He was then asked: "What became of the lady?" The man probably had forgotten all about the circumstance and was telling about some other case; he looked worried. "Well, he said, she walked around the back end of the car and started across the street. The plumbers had been digging a hole in the street and she fell into it and was hurt." I will never forget the look of unspeakable terror and disgust that came over the face of my friend Holmes, but I will say that he "hung" the jury.

I believe, too, my friends, if we did not in these great cities have a class of lawyers that have made a specialty of going after these accident cases we probably would not have so many sudden jerks to contend with in the street railway business. We had a shining example in this city. A poor fellow was hurt on one of our railways—he was mortally injured. When they picked him up he had clutched in one of his hands a card of a famous damage lawyer, who was ready to take the case on the basis of receiving one-half of any damages he might recover from the company. Again a barn was set on fire by a spark from a locomotive, and the evidence was that this same lawyer, who lived eight miles away, was there before the fire was out to get the case against the railroad company.

We have here a hilly city. The cars do not run fast enough for that sort of work and we can not use bicycles. A certain lawyer in this city is said to have a fast horse always ready and sits at his desk booted and spurred, and leaps upon his horse when he hears of an accident and gives a correct imitation of Paul Revere as he dashed through the country summoning our forefathers to rise up in its defense and meet the British at Concord and Lexington and save this glorious Monarchy for Mr. Hanna, or this grand Republic for Mr. Croker, as the case may prove to be next month. [Laughter.]

I believe if there was less of such unprofessional conduct there would not be so many sudden jerk suits.

But I have great hopes from these street car conventions. I speak seriously without any desire to throw any bouquets. In the first place, the average railway manager is a business man, and he knows the chances are about nine out of ten against him when he submits the question of the sudden jerk to the average common law jury. He usually expects the result that follows, and I must say there is no exhibition of overpowering joy so great as that on the countenance of our worthy president when he can go to the office of the company occasionally and say we have obtained a verdict for the defendant. I have high hope, however, for the future, when the railway managers get together as they are here and discuss plans and means for carry-

ing on the business so that there will be less liability to accidents. I see in the near future a sort of millennium in the street railway business, with gates upon the cars to keep the passengers from getting off before they are stopped, with fenders to catch them if they happen to get on the tracks, with bars on the windows to keep them from sticking their limbs out. The passenger, especially the lady passenger, will become a sort of a "Bird in a Gilded Cage," to which no harm can possibly come. I can see the "man on horseback," who now gives me so much trouble, back to the quiet pursuits of the farm, and I see the now unfortunate street railway lawyer beaming with a new gladness and offering a pean of thanks so that his life is like unto that of the married state as described by a lately politically deceased statesman, "One grand sweet song." [Applause.]

TOAST—"THE STATESMAN." RESPONDED TO BY MR. CHESTER SNIDER.

Toastmaster Holmes—The gentleman who last addressed you, with the characteristics of his nationality, always sees the joke upon the other fellow. I was much disappointed as he was telling you of the sudden jerk, that he did not have in remembrance a cross-examination of his own where a lady litigant of the same nationality was riding up near the gripman, and her cause of action was based upon the proposition that while she was in the act of alighting the car started up with a sudden jerk and threw her down. Mr. Walsh discovered that she had not told the gripman that she wanted to alight at this particular place, although she sat right at his hand. He pressed her very hard on that question, to know why she did not tell the gripman that she wanted to get off, and in explanation her reply to Mr. Walsh was, "Don't you know there's a sign on that car, 'Passengers must not talk to the gripman.'" [Laughter.]

We have, ladies and gentlemen, many different types of statesmen in this country. We have the statesman who stood between his country and financial ruin, as many of us believe, in the person of Grover Cleveland. [Applause.] We have the statesman, as others think, who can make more eloquent speeches than any other man living and keep it up for a longer space of time in the person of Mr. Bryan. [Applause.] We

have still another type of the statesman, who at the head of this government has fought two wars successfully and held the ship of prosperity steadily in her course, in the person of Mr. McKinley. [Prolonged applause.] But, in common parlance, there are others, and I now have the pleasure of introducing to you a gentleman who will tell you something of the statesman of the West. I have the honor of introducing Mr. Chester Snider, who will respond to the sentiment, "The Statesman." [Applause.]

Mr. Chester Snider then spoke as follows, in an Irish dialect:

Mr. Conductor, Gentlemen and Fellow-Members of the Ancient and Honorable Amalgamated Order of the American Street Railway Association, and any others: It is a pleasant occasion on which we are called together to assemble here this evening, and so far as I am personally concerned, during all my existence as a member, I may say a charter member, and high in the councils of this very same Association, I have never felt so full of honor nor so full of wine as I do this evening. [Laughter.] In the language of that great man, Mr. Patrick McNally, "May the American Eagle roost on your banner and scream out his lungs; and after the seventeen course dinner which I have finished, every time he flaps a wing I will agree to bust off another button." Success to the Honorable Order. There is none like us, and we are getting more different every minute. But, fellow members, there are other great industries in this grand country besides street railways, and I maintain among the principal ones, and perhaps its equal, is the statesman; and when I think of the statesman my mind reverts to that greatest of the greatest of them all, and perhaps not unbeknownst to some of yez, my special friend Mr. O'Reilly. His name was Dennis O'Reilly. I say "was," because pace to his ashes he is now dead and gone. Dennis O'Reilly, my friend, was no ordinary man, and had he lived, and had the opportunities presented themselves, he would have been known as the great, the only, the Napoleon Bonaparte of his time. In the early days of his career as Alderman of the Ninth ward many is the time he has thrilled me with the eloquence of a Diogenes as well as others, and he was as favorably known, ladies and gentlemen, as our lamented President, Mr. Abraham—ah—Lincoln—yes, that is right. Had he lived on and on till time went on, as the poet says, he would have been as great a man as that man, perhaps known to some of yez, Mr. George—ah—Washington. Well do I remember his eloquence the last time I heard him speak when he was a candidate for Alderman from the Ninth ward, when he arose in all his eloquence

and grandeur and said, which I can't remember exactly the words, but I will endeavor to tell you, were about as follows: "Hack drivers and others, as well as my most intimate friends of the Ninth ward, you sees before yez, Dennis O'Reilly, candidate for Alderman of the Ninth ward, subject to the nomination of the Democratic party. Of course there be others running for Alderman on this same ticket who be good men, but what have they ever done for the ward? What has O'Reilly done for the ward? I would ask you what did O'Reilly do when the Widow Milligan's billy goat was run over by Walton Holmes' Cable Railway cars? Didn't I go before the Board of the Common Council and get her allowed \$49.00 damages when the d—d old buck goat wasn't worth 49 cents? Yez, all know it, and yet there be those that say O'Reilly has done nothing for the ward. [Applause.] What did I do for the Mullarkeys's and the O'Briens's and O'Shaughnesseys's when they was working on the Third avenue cars in New York city? After they had finished, didn't I get every one of them a job aclaning up around Tammany Hall? Yez all know that I did, and yet there be those that say O'Reilly has done nothing for the ward. Come every one of yez on next Tuesday and put your shoulders to the wheel and elect O'Reilly, and when I am elected I will see that every old woman in the ward has a Jersey cow, while every voting Irishman has a horse and cart to work on the street, with the privilege of riding on Holmes's cars in St. Patrick's Day parade." [Applause.] (A voice says, "I think O'Reilly is an A. P. A.") "Who is that d—d female impersonator who says O'Reilly is an A. P. A.? I will bet a thousand dollars he is never seen in St. Patrick Day's parade and I will bet another thousand dollars he ates mate on Friday. Hurrah for O'Reilly." [Laughter and applause.]

Mr. E. M. Clendening, secretary of the Commercial Club, of Kansas City, was then called upon, and in a few words Mr. Clendening expressed the pleasure felt by all Kansas Cityans at having had the meeting of the American Street Railway Association in their midst and hoped that the Association would again visit that city.

INSTALLATION OF OFFICERS.

Toastmaster Holmes—While this concludes the programme of toasts, it does not entirely conclude the exercises of the evening. I have discharged my duties of toastmaster according to the best of my ability, and now have the honor of resigning my position in favor of the Vice-President, Mr. Rigg, who will take charge of this meeting. [Applause.]

Mr. Rigg—Mr. Toastmaster, I am not certain that we are going to allow you to resign. We have General Manager McCormack, of Cleveland, with us who has brought charges against you for not running your car properly, and I would ask him to explain his charges.

Mr. McCormack—Mr. Conductor, Ladies and Gentlemen: Mr. D. B. Holmes has conducted the car which you see there as a *fac simile* of one that we run on our street railway, and he has conducted it as we thought in a very able manner, but we have numerous complaints from our patrons assembled here who have ridden for several days on our cars free, and because of one complaint in particular from a Pennsylvania Dutchman by birth and a Kansas Cityan by inclination, it has been decided to dispense with your services, and I therefore discharge you from your duties with our compliments, and I take great pleasure in appointing in your place as conductor of the car a gentleman, for whom I ask from the Association their kind consideration, Mr. Walton H. Holmes. [Great applause.]

REMARKS OF PRESIDENT-ELECT HOLMES.

Mr. Walton H. Holmes—My friends, I thank you very much, indeed, for the high honor conferred upon me to-night. I promise you my best efforts for the ensuing year, and I hope to have the pleasure of meeting you all again in New York. I learn from our worthy Secretary, Mr. Penington, that this is not my night to make a speech. To be honest with you, I am very glad of it. I shall be glad to present Mr. Penington to you. I think he has something to say. He has been very quiet about it but from what he has said I think he would like to talk to you, and this is the nicest way I know of getting out of speaking myself. I thank you all most sincerely, especially our good Kansas City people, for extending to my friends of the American Street Railway Association the courtesies which they have shown. I stand ready and pledge myself on every occasion to reciprocate in every way that I can. I thank you very much. (The company then sang "For He's a Jolly Good Fellow.")

Mr. Penington—Mr. Toastmaster, I believe I was called upon to make a speech. I will say, ladies and gentlemen, that Mr. Holmes sat here a few minutes ago and said, "Tom, you are the only officer present besides myself; I know you can't make a speech, but get up and show yourself." I thank you. [Laughter and applause.]

The company then dispersed.

REPORT OF THE COMMITTEE ON MEMORIALS OF DECEASED MEMBERS.

Messrs. Rigg, of Reading, Pa., and Wason, of Cleveland, O., appointed by President Roach as a Committee on Memorials of Deceased Members, have filed the following obituary notices with the Secretary:

PHILIP T. BEGLEY.

Philip T. Begley, Superintendent of the Lowell and Suburban Street Railway Company, Lowell, Massachusetts, died December 24, 1899, after a brief illness, of pneumonia. He contracted a severe cold during one of the heavy snow-storms for which the winter of 1898-1899 was noted, and although he recovered at that time, his system was much weakened by his illness.

His first business experience was with the Pettee Machine Works, of Newton Upper Falls, Mass. During his connection with these works he made tours of England, Ireland and France for the purpose of buying machinery, and he also visited many cities in this country supervising the installation of electrical plants. He was considered to be an electrical expert of a very high order.

Mr. Begley had been Superintendent of the Lowell and Suburban Street Railway Company since 1892. He was unmarried.

AMOS FRANKLIN BREED.

Amos F. Breed, President of the Lynn and Boston Railroad Company, of Lynn, Mass., died Tuesday evening, May 22, 1900, of diabetes. He had been confined to his house for three weeks and his illness was considered serious from the beginning.

Mr. Breed was born October 15, 1830, at Woodend. He passed through the public schools and in early life entered the shoe business, which he followed for many years. In 1884 he was elected the President of the First National Bank, of Lynn, which office he held at the time of his death. He was also Vice-President and a director of the Lynn Institution for Savings, and Vice-President and a director of the Lynn Gas and Electric Company. He took charge of the affairs of the Lynn and Boston Railroad Company when its stock was selling at a very low figure. He went into the details of the management, improved the roadbed and rolling stock and opened up new branches.

Mr. Breed was elected a member of the Common Council for many successive years, and in 1876 was elected to the Legislature. In 1877 and 1888 was a member of the State Senate. In 1896 he was elected a delegate to the National Republican Convention. He was a member of many of the best clubs in the State of Massachusetts, among them the Middlesex, Massachusetts and Essex Clubs of Boston, the Park and Oxford, of Lynn, and the Eastern Yacht Club. Two sons survive him.

GARRETT A. HOBART.

Garrett A. Hobart, Vice-President of the United States, died at Paterson, N. J., November 21, 1899, of heart disease. For a long time prior to his death Mr. Hobart had been President of the Paterson Railway Company. It was largely through his endeavors that the property was brought to its present profitable condition.

Mr. Hobart was born June 3, 1844, at Long Branch, and was graduated from Rutger's College in 1863. He adopted the legal profession and became a successful man in every sense of the term. For many years he was Chairman of the Republican State Committee of New Jersey, and from 1884 was a member of the Republican National Committee. As Vice-President of the United States he presided over the deliberations of the Senate with great efficiency, and was always prominent in the councils of the Cabinet.

JOHN M'NULTA.

General John McNulta, Receiver of the Calumet Electric Street Railway Company, of Chicago, died suddenly on February 22, 1900, in the city of Washington, of heart disease, in the sixty-third year of his age.

He was born in the city of New York, and when a young man went to Bloomington, Ill., where he started a wholesale and retail tobacco

business. In 1861 he enlisted in Company H, of the Illinois cavalry, and received the commission of captain. He later became colonel of a regiment composed entirely of men from McLean county, Illinois. Colonel McNulta was wounded by the bursting of a shell in the siege of Vicksburg, and was subsequently discharged as brevet brigadier-general for meritorious service.

After the war he returned to Bloomington and studied law. He served a term in Congress. General McNulta was appointed receiver of the Calumet Electric Street Railway Company on April 30, 1897. He left a wife, three sons and a daughter.

VOLNEY C. TURNER.

Volney C. Turner, formerly President of the North Chicago Street Railway Company, died December 2, 1899. Mr. Turner was born at Malta, N. Y., February 25, 1823, and graduated from Williams College in 1846.

He entered business in Chicago, and in 1849 was admitted to the bar. In 1860 he was instrumental in starting the first street car line on the North Side. He served as Secretary, Treasurer and Vice-President, successively, of the North Chicago Street Railway Company, and in 1867 was made President of the company. From that time until his retirement, in 1886, he devoted all his energies to the perfection of street railway facilities on the North Side.

JOHN H. VANDER VEER.

John H. Vander Veer, Superintendent of Motive Equipment of the Brooklyn Heights Railroad Company, Borough of Brooklyn, New York City, died December 3, 1899, of typhoid fever. Mr. Vander Veer was taken ill soon after his return from the Chicago Convention, at which time he read a paper on "The Maintenance of Car Equipment."

He was born in Somerville, N. J., March 28, 1864, and his first business experience was as an office boy with the Central Railroad Company of New Jersey. On June 1, 1884, he was appointed chief clerk in the terminal station of that company at Jersey City, and put in charge of the harbor transfer work. He remained with that company until December 28, 1888, when he accepted a position as manager of the People's Railway Company, of Scranton, Pa. Resigning from this position he entered the employ of the Erie Railroad Company. In 1893 he became connected with the engineering department of the

Brooklyn City Railroad Company, and remained with the road ever since, through the different consolidations which took place.

Mr. Vander Veer was a member of the Brooklyn Engineers' Club and the New York Railroad Club. A wife and child survive him.

SPECIAL COMMITTEES, 1901.

Special committees to submit papers at the next meeting will be appointed during the year by the Executive Committee.

NEXT REGULAR MEETING.

The Twentieth Annual Meeting will be held at New York City, in the autumn of 1901.

CONSTITUTION AND BY-LAWS
OF THE
American Street Railway Association.

CONSTITUTION.

NAME.

I. The name of the Association shall be "The American Street Railway Association," and its office shall be at the place where the Secretary resides.

OBJECT.

II. The object of this Association shall be the acquisition of experimental, statistical and scientific knowledge, relating to the construction, equipment and operation of street railways, and the diffusion of this knowledge among the members of this Association, with the view of increasing the accommodation of passengers, improving the service and reducing its cost; the establishment and maintenance of a spirit of fraternity among the members of the Association by social intercourse, and the encouragement of cordial and friendly relations between the roads and the public.

MEMBERS.

III. The members of this Association shall consist of American Street Railway Companies, or lessees, or individual owners of street railways; and each member shall be entitled to one vote by a delegation presenting proper credentials.

AMENDMENT.

IV. This Constitution may be amended by a two-thirds vote of the members present at a regular meeting, after the proposed amendment shall have been submitted, in writing, at the preceding regular meeting and a copy sent to each of the members.

BY-LAWS.

APPLICANTS.

I. Every applicant for membership shall signify the same, in writing, to the Secretary, enclosing the requisite fee, and shall sign the Constitution and By-Laws.

OFFICERS AND EXECUTIVE COMMITTEE.

II. The Officers shall consist of a President, three Vice-Presidents, and five others, who shall constitute the Executive Committee, and a

Secretary and Treasurer. The Executive Committee shall have the entire charge and management of the affairs of the Association. The Officers and Executive Committee shall be elected by ballot, at each regular meeting of the Association, and shall hold office until their successors shall be elected. The duties of Secretary and Treasurer shall be performed by the same person. The Secretary and Treasurer shall not be a member of the Executive Committee.

DUTIES OF OFFICERS.

III. The officers of the Association shall assume their duties immediately after the close of the meeting at which they are elected; they shall hold meetings at the call of the President, or, in his absence, at the call of the Vice-Presidents, in their order, and make arrangements for carrying out the objects of the Association.

PRESIDENT.

IV. The President, if present, or in his absence, one of the Vice-Presidents, in their order, if present, shall preside at all meetings of the Association and of the Executive Committee.

TREASURER.

V. The duties of the Treasurer shall be to receive and safely keep all moneys of the Association; to keep correct accounts of the same, and pay all bills approved by the President; and he shall make an annual report to be submitted to the Association. He shall give a bond to the President in such sum, and with such sureties, as shall be approved by the Executive Committee.

SECRETARY.

VI. The duties of the Secretary shall be to take minutes of all proceedings of the Association and of the Executive Committee and enter them in proper books for the purpose. He shall conduct the correspondence of the Association, read minutes and notices of all meetings, and also papers and communications, if the authors wish it, and perform whatever duties may be required in the Constitution and By-Laws appertaining to his department. He shall be paid a salary, to be fixed by the Executive Committee.

MEETINGS.

VII. The regular meeting of the Association shall be held at such time between the fifteenth day of September and the fifteenth day of December, in each year, as the Executive Committee may decide to be best suited to the locality in which the meeting is to be held; the time to be decided on and each member of the Association notified of the selection by the first day of March in the year in which the meeting is to be held. Special meetings may be held upon the order of the Executive Committee. Notice of every meeting shall be given by the Secretary, in a circular addressed to each member, at least thirty days before the time of meeting. Fifteen members shall constitute a quorum of any meeting.

ORDER OF BUSINESS. (1.)

VIII. At the regular meeting of the Association the order of business shall be :

1. The reading of the minutes of the last meeting.
2. The address of the President.
3. The report of the Executive Committee on the management of the Association during the previous year.
4. The report of the Treasurer.
5. Reports of Special Committees.
6. The election of Officers.
7. The reading and discussion of papers of which notice has been given to the Secretary, at least thirty days prior to the meeting.
8. General business.

ORDER OF BUSINESS. (2.)

IX. At other general meetings of the Association, the order of business shall be the same, except as to the 3d, 4th and 6th clauses.

NOTICES.

X. The Secretary shall send notices to all members of the Association at least thirty days before each meeting, mentioning the papers to be read and any special business to be brought before the meeting.

EXECUTIVE COMMITTEE.

XI. The Executive Committee shall meet one hour before each meeting of the Association; and on other occasions when the President shall deem it necessary, upon such reasonable notice, specifying the business to be attended to, as the Committee shall, by vote, determine.

VOTING.

XII. All votes, except as herein otherwise provided, shall be *viva voce*; and in case of a tie, the presiding officer may vote.

NON-MEMBERS.

XIII. Any member, with the concurrence of the presiding officer, may admit a friend to each meeting of the Association; but such person shall not take any part in the discussion, unless permitted by the meeting.

READING OF PAPERS.

XIV. All papers read at the meetings of the Association must relate to matters connected with the objects of the Association, and must be approved by the Executive Committee before being read, unless notice of the same shall have been previously given to the Secretary, as hereinbefore provided.

PAPERS, DRAWINGS AND MODELS.

XV. All papers, drawings and models submitted to the meeting of the Association shall remain the property of the owners, subject, however, to be retained by the Executive Committee for examination and use, but at the owner's risk.

FEES.

XVI. Members shall pay an admission fee of twenty-five dollars, and annual dues of twenty-five dollars, payable in advance. The Executive Committee shall have no power to expend, for any purpose whatever, an amount exceeding that received, as hereinbefore provided for. It shall be the duty of the members to make such returns to the Secretary as shall be required by the Executive Committee.

ARREARS.

XVII. No member whose annual payment shall be in arrears shall be entitled to vote.

WITHDRAWAL.

XVIII. Any member may retire from membership by giving written notice to that effect to the Secretary, and the payment of all annual dues to that date, but shall remain a member, and liable to the payment of annual dues until such payments are made, except as herein-after provided.

EXPULSION.

XIX. A member may be expelled from the Association by ballot of two-thirds of the members voting at any regular meeting of the Association, upon the written recommendation of the Executive Committee.

RULES OF ORDER.

XX. All rules not provided for in these By-Laws shall be those found in Roberts' Rules of Order.

AMENDMENT.

XXI. All propositions for adding to or altering any of these By-Laws shall be laid before the Executive Committee, which shall bring them before the next regular meeting of the Association, if it shall think fit; and it shall be the duty of the Committee to do so, on the request, in writing, of any five members of the Association.

COPIES OF CONSTITUTION AND BY-LAWS.

XXII. Each member of the Association shall be furnished by the Secretary with a copy of the Constitution and By-Laws of the Association, and also a list of the members.

LIST OF MEMBERS

AND THEIR OFFICERS

NOVEMBER FIRST, 1900.

ARRANGED ALPHABETICALLY ACCORDING TO CITIES.

NOTE.—"Clerk," as shown in the following list, is equivalent to "Secretary"—this being a custom peculiar to the Eastern States.

Akron, O., Northern Ohio Traction Co.

Pres., H. A. Everett; Vice-Pres., Will Christy; Sec., C. F. Moore;
Treas., J. R. Nutt; Gen. Man., L. E. Beilstein; Elec. Eng., D. W. Pell.

Allentown, Pa., Lehigh Valley Traction Co.

Pres., Albert L. Johnson; Vice-Pres., C. M. Bates; Sec. and Treas.,
John E. Kenny; Gen. Man., Samuel Harris; Supt., Henry C. Barrow;
Elec. Supt., Richard R. Nevins.

Alton, Ill., Alton Ry., Gas and Elec. Co.

Pres., Treas. and Gen. Man., Joseph F. Porter; Vice-Pres., O. S.
Stowell; Sec., Henry S. Baker; Aud., H. E. Weeks; Chief Eng. and
Master Mech., H. C. Hoffman; Supt. Ry. Dept., W. E. Porter.

Anderson, Ind., Union Traction Co.

Pres., Philip Matter; Vice-Pres., J. A. Van Osdol; Sec. and Gen.
Man., Charles L. Henry; Treas., G. F. McCulloch; Elec., Charles Berry.

Asbury Park, N. J., Atlantic Coast Elec. R. R. Co.

Pres., George B. M. Harvey; Sec. and Treas., Albert C. Twining;
Gen. Man., Scott F. Hazelrigg.

Atchison, Kan., Atchison Ry., Light and Power Co.

Pres., J. P. Pomoroy; Vice-Pres., W. P. Waggener; Sec., James
M. Chisham; Treas., C. S. Hetherington; Gen. Man., J. A. Bendure;
Elec. Supt., J. F. Roth; Elec., J. C. Sweeney.

Atlanta, Ga., Atlanta Ry. and Power Co.

Pres. and Gen. Man., Ernest Woodruff; Vice-Pres., Thomas K.
Glenn; Sec. and Aud., A. J. Chapman; Treas., R. J. Lowry; Supt., H.
N. Hurt; Supt. of Shops, J. W. Bridge; Eng., J. R. Gordon.

Augusta, Ga., Augusta Ry. and Elec. Co.

Pres., Daniel B. Dyer; Vice-Pres., Roland R. Conklin; Sec., Treas. and Aud., C. O. Simpson; Gen. Supt. and Elec., William E. Moore.

Aurora, Ill., Aurora Street Ry. Co.

Pres. and Treas., R. B. Dodson; Vice-Pres., H. C. Tinker; Sec., Jacob Zeller; Gen. Man., D. A. Belden; Supt., George J. Paul.

Baltimore, Md., United Rys. and Elec. Co.

Pres., Nelson Perin; Vice-Pres., Walter S. Franklin; Sec. and Aud., H. C. McJilton; Treas., Briggs C. Keck; Gen. Man., William A. House.

Bay City, Mich., Bay Cities Consolidated Ry. Co.

Pres., M. P. Heraty; Gen. Man., E. S. Dimmock; Supt., William Luxton.

Binghamton, N. Y., Binghamton R. R. Co.

Pres., G. Tracy Rogers; Vice-Pres., J. B. Landfield; Sec., J. M. Johnson; Treas., John B. Rogers; Gen. Man. and Purch. Agt., J. P. E. Clark; Elec., Charles D. Brown.

Birmingham, Ala., Birmingham Ry., Light and Power Co.

Pres., A. M. Shook; Vice-Pres., Robert Jemison; Sec. and Treas., Edwin Warner; Gen. Man., John B. McClary; Ch. Eng., George H. Harris; Elec. Eng., D. B. Dimick.

Boston, Mass., Boston Elevated Ry. Co.

Pres., William A. Bancroft; Vice-Pres., Charles S. Sergeant; Clerk, John T. Burnett; Treas., William Hooper; Aud., Henry L. Wilson; Elec. Eng., Roger W. Conant; Supt. of Transportation, Julius E. Rugg; Supt. Motive Power, Charles F. Baker.

Bridgeport, Conn., Bridgeport Traction Co.

Pres., A. M. Young; Vice-Pres., Randel Morgan; Sec., H. J. Runkle; Treas., Louis Lillie; Gen. Man., J. E. Sewall; Supt., J. Butler; Ch. Elec., D. McGregor; Ch. Eng., R. Lohr.

Bridgeton, N. J., Bridgeton and Millville Traction Co.

Pres., Jeremiah J. Sullivan; Vice-Pres., Henry J. Crowley; Sec. and Treas., Charles L. S. Tingley; Supt., B. Frank Hires; Elec. Supt. and Ch. Eng., W. F. C. Meyers.

Brockton, Mass., Brockton St. Ry. Co.

Pres., John R. Graham; Vice-Pres., J. P. Morse; Clerk and Asst. Treas., H. E. Reynolds; Treas., J. H. Goodspeed; Aud., D. D. Bartlett; Gen. Man., E. C. Foster; Gen. Supt., H. B. Rogers; Elec., Charles F. Bancroft.

Brookfield, Mass., Warren, Brookfield and Spencer St. Ry. Co.

Pres., A. B. Bruce; Sec. and Treas., George A. Butman; Supt., Charles A. Jefts.

Buffalo, N. Y., Buffalo Ry. Co.

Pres., W. Caryl Ely; Vice-Pres., Daniel S. Lamont; Sec. and Treas., Richard F. Rankine; Aud., Frank E. Wood; Gen. Man., Burt Van Horn; Supt., Richard E. Danforth; Asst. Supt., C. A. Coons; Elec. Eng., C. K. Marshall; Eng. of Way, C. C. Lewis; Purch. Agt., Henry N. Ransom.

Butte, Montana, Butte Elec. Ry. Co.

Pres., William A. Clark; Sec. and Treas., J. C. Kennedy; Gen. Man., Jesse R. Wharton; Supt., Jesse S. Wathey; Elec., George Whitcomb.

Camden, N. J., Camden, Gloucester and Woodbury Ry. Co.

Pres., Anthony R. Kuser; Sec. and Treas., Thomas N. McCarter, Jr.; Aud., James R. Shurtz; Gen. Man., M. C. Ludlam; Supt., George E. Tracy.

Camden, N. J., Camden and Suburban Ry. Co.

Pres., William S. Scull; Vice-Pres., Benjamin C. Reeves; Sec., Samuel T. Corliss; Treas., Heulings Lippincott; Gen. Man., Walter E. Harrington.

Charleston, S. C., Charleston Consolidated Ry., Gas and Elec. Co.

Pres., Frank K. Carey; Vice-Pres., Philip H. Gadsden; Sec. and Treas., J. Bannister Hall; Aud., Pinckney J. Ballaguer; Elec., Wallace W. Fuller; Supt. Ry. Div., Theodore W. Passailaigue.

Chester, Pa., Chester Traction Co.

Pres., John A. Rigg; Vice-Pres., Henry C. Moore; Sec. and Treas., Arthur G. Jack; Aud., William S. Bell; Gen. Man., Frank L. Fuller; Gen. Supt., Joseph C. Lugar.

Chicago, Ill., Calumet Elec. St. Ry. Co.

Receiver, E. A. Potter; Pres., John Farson; Sec. and Treas., E. E. Simmons; Gen. Man., H. M. Sloan; Elec., W. A. Harding.

Chicago, Ill., Chicago City Ry. Co.

Pres., D. G. Hamilton; 1st Vice-Pres., Joseph Leiter; 2d Vice-Pres., W. B. Walker; Sec., Frank R. Greene; Treas., T. C. Penington; Aud., C. N. Duffy; Gen. Man., Robert McCulloch; Elec., J. C. Burgess; Mast. Mech., M. O'Brien; Supt. of Motive Power, Chris. E. Wilson; Supt. of Track, H. B. Fleming.

Chicago, Ill., Chicago Consolidated Traction Co.

Pres. and Gen. Man., John M. Roach; Vice-Pres., Edwin S. Hartwell; Sec. and Treas., C. F. Marlow; Aud., F. E. Smith; Gen. Supt., John J. Linden; Elec. Supt., James R. Chapman; Elec., A. Hanson.

Chicago, Ill., Chicago Elec. Traction Co.

Receiver, Charles Henrotin; Pres., Isaac L. Rice; Vice-Pres., H. Atkinson; Sec. and Gen. Man., E. R. Gilbert; Treas., J. S. Bache; Aud., C. F. Gladfelter; Supt., A. E. Davies; Elec., C. F. Dorrington.

Chicago, Ill., Chicago Union Traction Co.

Pres. and Gen. Man., John M. Roach; 1st Vice-Pres., R. A. C. Smith; Sec., M. B. Orde; Treas., James H. Eckles; Aud., F. E. Smith; Gen. Supt., T. A. Henderson; Elec. Supt., James R. Chapman.

Chicago, Ill., South Chicago City Ry. Co.

Pres., Dwight F. Cameron; Vice-Pres., D. M. Cummings; Sec., Treas. and Purch. Agt., O. S. Gaither; Aud., William R. Gaither; Supt., William Walmsley.

Cincinnati, O., Cincinnati St. Ry. Co.

Pres. and Gen. Man., John Kilgour; Sec. and Asst. Gen. Man., James A. Collins; Treas., Robert A. Dunlap; Aud., William R. Avery; Gen. Supt., John Harris; Elec. Eng., Bayard L. Kilgour; Eng. of Roadway, F. Reid Weizenecker; Purch. Agt., Alonzo G. Starr; Master Car Builder, Patrick Leen.

Cleveland, O., Cleveland City Ry. Co.

Pres., Mark A. Hanna; Vice-Pres., C. F. Emery; Sec. and Treas., J. B. Hanna; Asst. Sec., John Ehrhardt; Supt., George G. Mulhern.

Cleveland, O., Cleveland Elec. Ry. Co.

Pres., Henry A. Everett; Vice-Pres., R. A. Harmon; Sec., F. S. Barton; Treas., E. W. Moore; Aud., W. G. McDole; Gen. Man., Ira A. McCormack; Gen. Supt., Charles Currie; Elec. Supt., D. T. Carver.

Cleveland, O., Cleveland, Painesville and Eastern R. R. Co.

Pres. and Gen. Man., Charles W. Wason; Vice-Pres., J. A. Beidler; Sec., Fred. S. Borton; Treas., E. W. Moore; Asst. Sec. and Treas., G. E. Bender; Supt., Joseph Jordan.

Colorado Springs, Col., Colorado Springs Rapid Transit Ry. Co.

Pres., W. A. Ramsay; Vice-Pres. and Gen. Man., A. L. Lawton; Sec. and Treas., W. A. Baldwin; Gen. Supt., Frank C. Lawton; Asst. Supt., Harry T. Paterson.

Columbus, O., Columbus Ry. Co.

Pres., Robert E. Sheldon; 1st Vice-Pres., Treas. and Gen. Man., Edward K. Stewart; 2d Vice-Pres., Clarence M. Clark; Sec. and Aud., Philander V. Burington; Gen. Supt., Michael S. Hopkins.

Council Bluffs, Ia., Omaha and Council Bluffs Ry. and Bridge Co.

Pres., N. W. Wells; Vice-Pres., J. J. Brown; Sec., C. T. Stewart; Treas., J. H. Millard; Gen. Supt. and Aud., W. S. Dimmock; Supt. of Rolling Stock and Machinery, W. B. Tarkington.

Dallas, Texas, Dallas Consolidated Elec. St. Ry. Co.

Pres. and Gen. Man., G. Van Ginkel; Vice-Pres., J. B. Wilson; Sec. and Gen. Supt., Edward T. Moore; Treas., E. J. Gannon; Aud., H. M. Thetford; Asst. Supt., J. L. Wade; Elec. Supt., William Urie.

Danville, Ill., Danville St. Ry. and Light Co.

Pres., W. P. Cannon; Vice-Pres., A. C. Daniel; Sec. and Treas., E. X. Leseure; Gen. Man., Samuel L. Nelson; Supt., M. Connor; Chief Eng., W. Jones; Chief Elec., O. J. Penwell.

Davenport, Ia., Tri-City Ry. Co.

Pres., Edward E. Cook; Vice-Pres., Frederick C. Denkmann; Sec., Treas. and Gen. Man., James F. Lardner; Gen. Supt., John G. Huntoon; Elec. Eng., John D. Fish.

Dayton, O., Dayton and Western Traction Co.

Pres., Treas. and Gen. Man., Valentine Winters; Vice-Pres., Charles B. Clegg; Sec., David B. Corwin; Aud., Howard Fravel; Elec., J. E. McFadden.

Dayton, O., People's Ry. Co.

Pres., John A. McMahon; Vice-Pres., Henry J. Crowley; Sec. and Treas., Charles L. S. Tingley; Gen. Man., George B. Kerper; Supt., Nelson Routzahn; Elec., John L. Cook.

Denver, Col., Denver City Tramway Co.

Pres., Rodney Curtis; Vice-Pres., William N. Byers; Sec., William G. Evans; Treas., George E. Ross-Lewin; Aud., John B. Hogarth; Gen. Supt., Simeon W. Cantril; Elec., A. M. Ballou.

Des Moines, Ia., Des Moines City Ry. Co.

Pres., J. S. Polk; Vice-Pres., G. M. Hippee; Sec., A. G. Maish; Treas. and Gen. Man., George B. Hippee; Supt., W. G. Owens; Elec. Supt., E. R. Emmons.

Detroit, Mich., Detroit Citizens' St. Ry. Co.

Pres., Tom L. Johnson; Vice-Pres. and Treas., Jere C. Hutchins; Sec., Albert E. Peters; Aud., Irwin Fullerton; Gen. Man., Antoine B. du Pont; Gen. Supt., A. H. Stanley; Mech. Eng., Thomas Farmer, Jr.; Supt. of Tracks, E. J. Dunne.

Detroit, Mich., Detroit and Pontiac Ry. Co.

Pres., George Hendrie; Vice-Pres., Stephen Baldwin; Sec., Treas. and Gen. Man., Strathearn Hendrie; Aud., R. J. McKinney; Supt., John Busby.

Detroit, Mich., Detroit, Rochester, Romeo and Lake Orion Ry. Co.

Pres. and Gen. Man., John Winter; 1st Vice-Pres., Oliver H. Lau; 2d Vice-Pres., A. L. Parker; Sec. and Aud., Fred. J. McMurtrie; Treas., Frank C. Andrews; Supt., George R. Johnson; Elec. Supt., Bret Harter.

Duluth, Minn., Duluth-Superior Traction Co.

Pres., C. G. Goodrich; Sec. and Treas., Luther Mendenhall; Aud., S. L. Reichert; Gen. Man., Herbert Warren; Chief Eng., John Carson; Roadmaster, Thomas A. Armstrong.

Elgin, Ill., Elgin City, Carpentersville and Aurora Ry. Co.

Pres., William Grote; Vice-Pres. and Gen. Man., James B. Lane; Sec., A. B. Church; Treas., E. D. Waldron; Supt., W. A. Ballou; Man. of Power Dept., Christian Wuestenfeld.

Elmira, N. Y., Elmira Water, Light and R. R. Co.

Pres., Frank R. Ford; Vice-Pres. and Gen. Man., Charles F. Uebelacker; Sec. and Treas., John M. Diven; Aud., C. A. Twining; Supt., Francis G. Moloney.

Evansville, Ind., Evansville St. Ry. Co.

Receiver and Gen. Man., H. D. Moran; Pres., O. W. McGinnis; Sec., A. Mann; Supt., John Cash; Elec. Supt., A. H. Mann.

Fall River, Mass., Globe St. Ry. Co.

Pres. and Gen. Man., Robert S. Goff; Vice-Pres., P. F. Sullivan; Sec., M. G. B. Swift; Treas., Herbert H. Read; Gen. Supt., John H. Bowker; Elec. Eng., George W. Palmer, Jr.

Findlay, O., Findlay St. Ry. Co.

Pres., George B. Kerper; Vice-Pres. and Treas., C. D. Kinney; Sec., J. A. Bope; Aud., A. G. Starr; Supt., Charles F. Smith; Elec., William Twining.

Fond du Lac, Wis., Fond du Lac St. Ry. and Light Co.

Pres. and Gen. Man., T. F. Grover.

Ft. Wayne, Ind., Ft. Wayne Traction Co.

Pres., H. P. Eells; Vice-Pres., E. A. Bourne; Sec. and Treas., H. P. McIntosh; Aud., Harry Vodemark; Gen. Man., A. L. Scott; Supt., J. W. Tompkins; Elec., M. Kehoe.

Galesburg, Ill., Galesburg Elec. Motor and Power Co.

Pres., Fred. Seacord; Vice-Pres., Robert Chappell; Sec. and Treas., Loren Stevens; Supt., Judd Seacord.

Galveston, Tex., Galveston City R. R. Co.

Receiver and Gen. Man., R. B. Baer; Pres., Julius Runge; Vice-Pres., A. J. Walker; Sec., A. Drouilhet; Treas., Joseph Lobit.

Grand Rapids, Mich., Grand Rapids Ry. Co.

Pres., Anton G. Hodenpyle; Vice-Pres., C. M. Clark; Sec., B. S. Hanchett, Jr.; Treas., William H. Anderson; Gen. Man., G. Stewart Johnson; Elec. Supt., W. W. Annable.

Hamilton, O., Southern Ohio Traction Co.

Pres., Will Christy; Vice-Pres., M. J. Mandelbaum; Sec. and Treas., F. T. Pomeroy; Aud., Warren Bickwell; Gen. Man., F. J. J. Sloat; Gen. Supt., W. W. Crawford; Elec. Supt., L. M. Sheldon.

Hamilton, Ontario, Hamilton Elec. Light and Cataract Power Co., Ltd.

Pres., Hon. J. M. Gibson; Vice-Pres., James Dixon; Sec., John Patterson; Treas., John Moodie; Traction Man., C. K. Green; Supt., F. B. Griffith; Elec., C. D. French.

Harrisburg, Pa., Harrisburg Traction Co.

Pres., Edward Bailey; Vice-Pres., B. F. Myers; Sec. and Treas., William J. Calder; Supt., Frank B. Musser.

Hartford, Conn., Hartford St. Ry. Co.

Pres., E. S. Goodrich; Vice-Pres., Samuel G. Dunham; Sec. and Treas., Daniel R. Howe; Gen. Man., Norman McD. Crawford; Supt., Frank Caum.

Hazleton, Pa., Lehigh Traction Co.

Pres., C. W. Kline; Vice-Pres., W. H. Lawall; Sec., E. S. Doud; Treas., N. C. Yost; Gen. Man., A. Markle; Supt., George W. Thompson; Elec. Eng., C. A. B. Houck.

Highwood, Ill., Chicago and Milwaukee Elec. Ry. Co.

Pres., George A. Ball; Vice-Pres., Albert C. Frost; Sec. and Aud., George M. Seward; Treas., Joseph W. Mauck; Gen. Supt., Robert S. Ives; Elec., Fred J. Frazier.

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